

AN INQUIRY  
INTO THE  
NATURE AND ORIGIN  
OF  
MENTAL DERANGEMENT.  
COMPREHENDING  
A CONCISE SYSTEM  
OF THE  
PHYSIOLOGY AND PATHOLOGY  
OF THE  
HUMAN MIND.

AND A  
HISTORY OF THE PASSIONS AND THEIR EFFECTS.

---

By ALEXANDER CRICHTON, M.D.

PHYSICIAN TO THE WESTMINSTER HOSPITAL, AND PUBLIC  
LECTURER ON THE THEORY AND PRACTICE OF  
PHYSIC, AND ON CHEMISTRY.

---

VOLUME II.

---

LONDON:

PRINTED FOR T. CADELL, JUNIOR, AND W. DAVIES,  
IN THE STRAND.

1798.



BOOK II.  
CONTINUED.

---

CHAPTER VI.

ON IMAGINATION, AND ITS DISEASES.

*The expression imagination, often applied to phenomena which are quite different from each other. Of reverie. Disproportion between the representative faculty of the mind and judgment. It may be either born with a person, or accidentally excited; the accidental exciting causes classed, and enumerated. The great danger of a natural disproportion between imagination and judgment pointed out, and explained. The accidental derangement of intellects which it occasions illustrated by cases.*

THE word imagination has been indiscriminately applied to many phenomena, and

VOL. II.                      B                      operations

operations of the mind, which, although they resemble each other in their general character, are very different in their real nature. The figures and phantoms of our dreams, the enchanting scenery and pictures we form when we build castles in the air, the representations which occur in the deliria of fevers, and of insanity, the sudden intrusion of thought, which anger, jealousy, fear, and other passions give birth to ; all these are considered as the effects of one faculty ; they are called illusions of the imagination. But what is much worse, and obviously wrong in a philosophical light, is, that many active, voluntary, and complex operations of the understanding, are also called by the name of imagination ; as, for instance, the genius of a painter, poet, sculptor, or novel writer, &c.

It must be evident to any one who reflects even but slightly on the subject, that many of these mental phenomena are essentially different from each other, and ought therefore to be distinguished by peculiar terms ; but the poverty of language is such, and the notions

which

which people form of them so inaccurate, that many obstacles oppose themselves to the accomplishment of this very desirable object.

The method of this work does not permit me to enter fully into this subject; but a short analysis becomes unavoidable, especially as those points of analogy in which the various kinds of imagination, as they are commonly called, happen to agree, must be rendered obvious in order to understand many things which are to follow.

It often happens when our attention is relaxed while engaged in any pursuits, that an image, or thought, wholly foreign to it, at least as it appears to us at the time, shall present itself to our mind; for instance, in reading a book, or in the midst of conversation, the image of an absent friend, of some absent scene, or some past action, or expected good, shall suddenly present itself in such a manner as to arrest our attention. Under such circumstances we often read on for a considerable time, but do not understand one word of the



book; and the voices of those who converse with us, reach the ears, and produce their full corporeal effect there, but the progress of the impression is stopped by that already present in our mind. A person in such a state is said to be in a dream, reverie, or absent fit, &c.

However unconnected the subject of our reverie may be with that from which it originally sprung, yet there can be no doubt that it came into the mind on the same principle as that on which all old thoughts succeed each other, I mean the principle of association. The intermediate steps are not always taken notice of, and hence it often appears a mystery to the absent person himself, how such ideas should have presented themselves. The truth of this assertion has been already proved in the chapter on Attention.

Almost every individual is subject to such kinds of intrusion as this, for it rarely happens on the one hand that books, or conversation, or even the more necessary pursuits of our life,

are sufficient to command unabated attention ; and on the other hand, few people strive to obtain that complete mastery over attention which alone can prevent the wandering of the mind ; but when attention is not forcibly directed to one object, or series of thoughts, and any idea is presented to the mind, with which several others are associated, each leading to a different chain of ideas, the power of concatenation alone shall mislead the mind, until some accidental circumstances again bring back the attention to its former objects. In many people, partly from the original conformation of their mind, partly from neglect of education, attention is so little under control, that it cannot be strongly directed to any one subject, except for a very short time ; the character of thoughtlessness, ignorance, and volatility, which this occasions, and its other baneful effects, have been already spoken of in the chapter on Attention.

As the subjects of waking dreams are as various as the notions which a person has ever acquired, so it is evident that the corporeal effects  
of

of such a state of mind must be as various as human action itself, except in this respect, that they are either sooner repressed, or sooner interrupted by impressions of external objects. If an absent person imagines himself engaged in controversy, his lips move as if in conversation ; if his subject of thought be an object of any passion, as anger, jealousy, envy, hatred, or love, his countenance and gestures betray the emotions natural to these passions.

Such kinds of imagination seldom produce any permanent mischief, except when they occasion an incurable habit of inattention, the bad effects of which have been fully considered.

Between the various acts of imagination alluded to in the beginning of this chapter, there is evidently one very great distinction to be made. They may with much propriety be divided into two great classes.

The first class is quite involuntary, the other, on the contrary, is so far voluntary, that the images which occur to the mind arise from  
the

the active employment of several faculties. The objects of our dreams, the various things which are seen in the delirium of fevers, and in insanity, and the spectres which seem to present themselves before the eyes of many young people, when left in the dark, and the visions of some religious devotees, and believers in the immediate agency of spirits, all present themselves involuntarily to the mind. But the images which HOMER, SPENSER, KLOPSTOCK, and SHAKESPEAR, give birth to, and which are called productions of the imagination, are the effects of a voluntary exercise of various mental faculties, and not to be attributed to any single one to which the name of imagination ought to be exclusively applied. The proof of this will follow in the next chapter, in which genius is spoken of.

Whether the images arise involuntarily, or from the voluntary efforts of the mind, they are all to be considered as acts of the representative faculty.

Now

Now it may be observed that the representative faculty of the mind is often disproportionately great in regard to the other faculties, especially to that of judgment. Such a case is to be considered as highly dangerous, not only inasmuch as it is the source of many errors in judgment, but also as it is a powerful *genitrix* of many permanent kinds of delirium.

A disproportionate activity of the representative faculty of the mind may either be born with a person, or it may be accidentally excited.

In both cases the images of the mind make a stronger impression on the brain than that which the impressions of external objects do, and this is the sole cause why people believe in their reality. That this supposition is founded in truth is proved by a great number of facts, all of which tend to establish this general axiom, that the belief in the reality of the phantoms of the imagination arise either in consequence of causes which prevent the impressions.

pressions of external objects from reaching the brain with a due degree of force, or else from the images of the imagination having acquired such a degree of force from frequent repetitions, as to be superior in their effect to those derived *ab externo*. Many people, previous to the attack of delirium, if they shut their eyes so as to exclude the sight of external objects, immediately see, as it were, a crowd of horrid faces, and monsters of various shapes, grinning at them, or darting forward at them. As soon as they open their eyes all these phantoms vanish; if they fall asleep they are greatly disturbed by these apparitions, and have horrid and fearful dreams. Every medical man of observation must have taken notice that, previous to the commencement of a delirium, the patient is often conscious of its approach. Before the images of his imagination become so vivid as, by their action on the brain, to entirely obstruct the passage of those of external bodies, they only operate occasionally, and the patient, therefore, being able to compare their influence with those which arise from the people, and things around him, becomes conscious

scious of a difference between them. Thus patients when they first begin to rave, in fevers, only do so when the room is darkened, or when they shut their eyes : upon opening their eyes, or upon being allowed to see a good deal of light, the delirium goes off, and recollecting what things they saw, and their influence, they often remark, of their own accord, that they are sure they were wandering, or raving.

It has been just now remarked, that a disproportionate activity of the representative faculty may arise from accidental causes. These are various :

1st. Diseased arterial action, as occasioned by

- a. Fevers, and other acute diseases. (*See Inquiry into the Physical Causes of Delirium in Book I.*)
- b. Common, and specific inflammation of the brain. (*ibid.*)
- c. Intoxication. (*ibid.*)
- d. Certain poisons. (*See No. 4. in the Appendix.*)

2dly. Causes which counteract the impression of external bodies.

a. Diseased viscera, &c. (*See the chapter on Hypochondriasis, Book I.*)

b. Sleep.

3dly. Causes which exalt imagination, and at the same time destroy judgment.

a. The faculty of fiction too frequently exercised. (*To be discussed in the next chapter.*)

b. Strong passions. (*See Book III.*)

A person born with a disproportion between the activity of his imagination and his judgment, has a peculiarity of mental character which is easily to be discovered in very early life, except a number of very happy circumstances have concurred to diminish it.

Young people of this description are commonly endowed with great sensibility of nerves, so that every impression *ab externo*, is quickly



quickly and forcibly conveyed to the mind, and *vice versa*, the images of the mind act quickly, and with great force, on the corporeal parts. All affociations of thought connected with any visual object, or with passages of books, or subjects of conversation, are quickly brought into the mind; and hence there is a character of life, spirit, and cleverness in their conversation, which is not discovered in other young people. The liveliness with which all impressions are felt does not allow time for the due exercise of judgment, and therefore they generally draw many erroneous conclusions concerning things which are easily seen in their right light by other people. They act with precipitation, and consequently fall into many errors which a little foresight (judgment as to future events,) might have prevented. Then they are all bustle, confusion, and folly, or all contrition and sorrow, or else in actual despair; and the motives of these violent commotions of mind and bodily action, are never proportionate to the effects.

Their feelings are very acute ; *pleasure*, both corporeal and mental, generally throws them into excessive agitation, and bodily pain, if their frame be tender ; and if they be very young, often excites convulsions. They are powerfully affected by all desires and passions, and the most trifling causes of excitement, or depression, overcome their judgment.

When such people have once entered on the busy scenes of life, and their judgment has not been strengthened by a judicious mode of education, they are exposed to incessant evils. They do not take the beaten path ; they wander very easily into the region of possibilities ; at times giving ear to the slightest inspirations of hope ; at other times so intirely depressed by ill-founded fears and terrors, that they may be said to be on the brink of despair. A courteous smile, and a kind and civil behaviour, from one who has it in his power to serve them, makes them mistake him for a patron. When they are disappointed, hate and anger quickly follow ; if they are often overcome by disappointment, and do not succeed

ceed in the world, loud, general clamours, are pronounced against all mankind; the common rivalship of men is construed into malice and persecution, and except accidental favours of fortune remove the causes of their distress and disappointment, misanthropy follows.

Should a person, born with such a disproportion between his imaginary powers and judgment, have this faculty of his mind unfortunately exalted by a store of images, which, from their nature destroy judgment, such as horrid notions of supernatural agents, as of devils, ghosts, hobgoblins, &c. as is but too frequently the case among young people, and also those of the lower orders, the most melancholy effects result. It would be an easy matter to fill many pages with illustrations of this position, as the records of medicine are full of them. But one or two are sufficient to explain what is meant. A Mr. CHARLES LENZ, a student of philosophy, at the university of Jena, relates the following case from his personal knowledge of the fact.

“ A young

“ A young girl about nine or ten years old,  
“ had spent her birth-day with several com-  
“ panions of her own age, in all the gaiety of  
“ youthful amusement. Her parents were of  
“ a rigorous devout sect, and had filled the  
“ child’s head with a number of strange and  
“ horrid notions about the devil, hell, and  
“ eternal damnation. In the evening, as she  
“ was retiring to rest, the devil appeared to  
“ her, and threatened to devour her ; she gave  
“ a loud shriek, fled to the apartment where  
“ her parents were, and fell down, apparently  
“ dead, at their feet. A physician was called  
“ in, and she began to recover herself in a few  
“ hours. She then related what had hap-  
“ pened, adding that she was sure she was to  
“ be damned. This accident was immediately  
“ followed by a severe and tedious nervous  
“ complaint.” *Psychological Magazine*, Vol.  
IV. part I. p. 70.

Case 2d. “ In Kleifche, a small village in  
“ Germany, belonging to Mr. V. S. a maid-  
“ servant of that gentleman’s family was sent  
“ a short league from home to buy some meat.  
“ She

“ She executed her orders correctly, and as  
“ she was returning in the evening, she thought  
“ she suddenly heard a great noise behind her,  
“ like the noise of many waggons. Upon  
“ turning round, she observed a little grey  
“ man, not bigger than a child, who com-  
“ manded her to go along with him. She did  
“ not, however, return any answer, but con-  
“ tinued to walk on. The little figure ac-  
“ companied her, and frequently urged her to  
“ go along with him. Upon reaching the  
“ outer court of her master’s residence, she  
“ was met by the coachman, who asked her  
“ where she had been, to which she returned a  
“ very distinct answer. He did not remark  
“ the little man, but she still continued to do  
“ so. As she was passing the bridge, he sum-  
“ moned her for the last time, and upon her  
“ refusing to answer him, he told her, with a  
“ menacing look, that she should be four days  
“ blind and dumb, and having said so he dis-  
“ appeared.

“ The girl hastened to her apartment, and  
“ threw herself on the bed, unable to open  
“ her

“ her eyes, or to pronounce a word. She ap-  
 “ peared to understand all that was said, but  
 “ could not make any answer to the questions  
 “ which were proposed to her, except by signs.  
 “ Every thing was tried for her recovery by  
 “ the family with whom she lived, but all was  
 “ in vain. She was incapable of swallowing  
 “ the medicines which were ordered for her.  
 “ At last, on the expiration of the fourth day,  
 “ she arose in tolerably good health, and nar-  
 “ rated what had happened to her.” *Psych.*  
*Mag.* Vol. II. part 2. p. 14.

In the Appendix several other cases, some-  
 what analogous to these, will be found, and  
 which are sufficient to point out the nature of  
 this singular illusion. (See Appendix, No. 5.)  
 It must occur to every person of reflection,  
 that most of the idle stories concerning apparitions  
 have no other foundation than that which  
 has been pointed out in the two preceding  
 cases.

These cases have been brought forward to  
 prove the existence and influence which such  
 a vivid representative faculty has in predi-  
 Vol. II. C posing

posing to delirium. The causes which excite the delirium itself, commonly called in medical language, the occasional causes, are exactly the same with those which produce temporary illusion. The permanency of the disease depends on the degree of predisposition on the one hand, and the nature and force of the exciting or occasional causes on the other.

It ought in candour and in justice to this peculiar constitution of mind to be remarked, that it does not necessarily follow that a disproportion between the representative faculty of the mind and judgment, shall inevitably lay the foundation for such aberrations of intellect as have been just now described. Except there is, unfortunately, a family taint, it may be corrected, provided a judicious mode of education be adopted. The great art in such cases consists in strengthening judgment, and in exercising the memory in the correct enunciation of facts. It would lead me much out of my present track to dwell on this subject; besides, it will be fully considered in the curative part.

## CHAPTER VII.

ON GENIUS, AND THE MENTAL DISEASES  
TO WHICH IT IS MOST EXPOSED.

*Genius analyzed, and the influence of the various faculties which constitute it observed. The general principle explained upon which repeated and excessive efforts of genius produce injury to the individual. When a man of genius ought to stop his studies; the symptoms which announce danger mentioned. How it is to be accomplished. How want of sleep arises from intense study. How bodily disorders arise; cases illustrative of this. How illusions of the imagination are believed in; the natural laws of human thought determine us to believe in them when once they acquire a certain degree of vividness. Two cases of singular illusion mentioned. How the exertions of genius terminate in delirium. The particular kinds of study which are most apt to occasion delirium stated. Various cases brought*

C 2

*forward*



*forward to illustrate the aberrations of mind to which genius is exposed.*

IN all acts of invention, we employ, first, abstraction, to separate individual notions, or parts of notions, from those with which they were formerly associated in our mind ; and, secondly, we give them a new arrangement, so as to form a new *concrete*. Thus, in the representation of a sphynx, the poet and the painter abstract, in idea, the head and the neck of a beautiful woman from the rest of her form, and combine them, in their thoughts, with the body and tail of a lionsess. They also abstract from birds the wings and talons, and add these to the figure, and thus give birth to such a monster as nature never created, and which, in one point of view, might be considered as the offspring of pure fancy ; but every part is originally borrowed from various objects of nature, and have been often seen, and in this respect, therefore, the production is to be considered as the effect of our experience.

We

We can modify the representations of our mind in a great variety of ways, but it is always by means of acquired knowledge that we are enabled to do so. We have seen very tall men, and also children, and very little men; it is, therefore, but extending, as it were, our experience, to imagine a human figure so tall that its head might reach the clouds, or so diminutive, that like one of SHAKESPEAR'S elves, it might creep into an acorn-cup. When the vivid thoughts of genius mount from earth to heaven, and fashion angels after human shape; when ornaments of gold and silver, rubies and diamonds, and many gems, are made to decorate the celestial palace of Him who created millions of worlds; and the heated fancy of the poet relates the history of battles fought against the Almighty, in which the warlike instruments employed were similar to those used by men; no other proof need be brought forward of the limits within which imagination is bound, or the store-house from which its images are borrowed.

In works of genius, not only abstraction and combination, but judgment also, is absolutely necessary. By means of this faculty we make a proper selection of the materials which the representative faculty of the mind yields. The stream of ideas must be restrained lest they break down the natural banks of reason ; for if judgment be not constantly employed in composition, as much nonsense may be either spoken or written by a man of imagination, as is uttered by a person in the delirium of a fever. Genius, in the highest degree in which it can exist, is the result, then, of the combined influence of several faculties of the human mind.

Men of genius, or imagination, as they are often called, differ from each other according as one or other of these faculties predominates. If the representative faculty overbalances the rest, the work produced will abound in many new thoughts, and vast conceptions, but the acts of judgment will be few in comparison.

It is said of many productions of poetry and the fine arts, that they do not exhibit any  
genius.

genius. A poem may be poetic as to the arrangement of language, the correctness of versification, and even as to the figures which adorn it; the subject also may be truly poetic, but still it may be devoid of true genius, for except it exhibits new combinations of thought, which, at the same time that they strike us as being new, do not shock our judgment by their extravagance, but appear as the glowing emblems of probable existences, or probable truths, there is no genius in such a composition. Let it not be imagined that the plain discovery of truth is essential to genius; it is enough that it exhibits such a novelty of thought as to awaken new trains of ideas in the minds of others, and, like the torch of Prometheus, animate men who were before inanimate.

When the imagination is ardent and creative, but counterbalanced by strong and correct judgment, every thought which is great, and yet chaste, may be expected. The newest, richest, and most unexpected combinations, arise copiously like the luxuriant produce  
of

of a fertile soil, and being submitted to the active and unerring care of reason, cannot fail to give general satisfaction, and become of general use. The most correct minds find a pleasure in the study and contemplation of such works; for, although many natural bodies are disembodied, and fashioned into a thousand new shapes, and those things which have no corporeal existence, such as faith, piety, and truth, vice, hatred and error, are presented to us in various human forms, yet the action and language, and the character and qualities which are given them, are so appropriate, that most men often find themselves under a momentary delusion, as to the reality of the images. Even when the most fanciful subjects present themselves to a poet, in whom an ardent and well-stored imagination is combined with a correct judgment, they will assume an appearance so natural, that though different from the object of our senses, we seem as if we saw new sights, heard new sentiments, and were transported into new worlds and regions. This is the peculiar effect of true genius, and implies a wonderful

derful union of extraordinary powers in the various faculties of the mind.

A process of the human mind, so extremely complicated as this one is, must necessarily be greatly exposed to frequent disorder. As the phenomena of the disorders to which it is subject are very remarkable, and have not been accurately examined, I find it necessary to enter into a minute investigation of the mode of their production.

Although every part of the human body which acts, and which suffers action, may be strengthened and improved by a due degree of exercise, yet we know from experience that when the exercise is continued too long, or is made to consist of a repetition of violent exertion, much mischief and danger generally ensues; the texture of the part suffers a considerable though not an apparent change, and great disorder and debility follow.

This physiological observation applies equally to the brain as to every other part of  
our

our frame, whether we consider it a part acting on the mind by means of impressions derived from external objects, or as acted on by the mind, as is the case in every effort of memory, judgment, imagination, passion, &c.

In the exercise of the body, as well as in that of the mind, it is impossible to fix any general standard for all mankind, so intirely does this depend upon various circumstances, such as age, sex, temperament, state of bodily health and habit, &c. But there is a faithful monitor within us, in our own feelings, which ought to warn us when any exertion of the mental faculties is carried too far and ought to be discontinued. What I allude to is a sense of bodily fatigue and weariness, which always follows long-continued and excessive attention; to which may be added feelings, which every person experiences on such occasions; a sort of fullness, tension, and uneasiness about the forehead, often terminating in severe head-ach. This observation has not escaped the learned and ingenious TISSOT. In his work on the health of men of learning, he says,  
“ Quiconque

“ Quiconque a pensé fortement une fois dans  
 “ sa vie, a fait cette experience sur soi même,  
 “ et il n’y a point d’homme de lettres qui ne  
 “ soit sorti plusieurs fois de son cabinet avec  
 “ un violent mal de tête, et beaucoup de cha-  
 “ leur dans cette partie, ce qui depend de  
 “ l’état de fatigue et d’échauffement dans  
 “ lequel la moëlle du cerveau se trouve.”

*Sur la Sante de Gens des Lettres, p. 145.*

It is a melancholy truth, that in intense  
 study such corporeal feelings are seldom suf-  
 ficient to break the associations with which  
 the mind is occupied. Indeed, the idea of  
 intense study naturally supposes an insensibi-  
 lity to every impression, except such as are  
 connected with the present thoughts; and  
 therefore it at first sight seems as if an impossi-  
 bility were required, when it is said that study  
 ought to be broken off when these corporeal  
 feelings occur; but this depends on our never  
 having connected any powerful idea with these  
 feelings, such, for instance, as there being the  
 signal of much danger; were this the case,  
 we should find the operations of our mind in-  
 tirely



tirely interrupted by it, as soon as the body began to suffer even in a small degree.

The generality of men of study are not sufficiently aware of the danger of long-protracted or violent exertions of the mental faculties, and therefore the corporeal effects which I have just now mentioned do not awaken any thoughts powerful enough to divert them from their pursuits; or if they are powerful enough to interrupt the operations of the mind for a little, yet, through a mistaken zeal, and, as if ashamed of giving way to what they consider an effect of indolence, they endeavour by a renewed effort of attention to regain the train of ideas which were interrupted.

As this work may probably fall into the hands of some in whom these dangerous habits of intense study have not yet produced much mischief, and who may be unacquainted with the truth of the observations which have been just made, I shall take a cursory view of the  
immediate

immediate bad effects of too intense application of mind, not only as the cause of many melancholy kinds of occasional delirium, but also as being often the source of downright insanity.

In every action of the mental faculties, the action of the arteries of the brain is increased, and a greater quantity of blood than usual is immediately transmitted to it; a kind of sanguineous congestion takes place in the vessels of the whole head, as is evident from the sense of fullness, giddiness, head-ach, a redness of the face and eyes, which are often felt upon any unusual exertion of mind by those who are not naturally strong, or who are weakened by indisposition; the irritability of the blood-vessels of the brain, therefore, are preternaturally stimulated, in the first place, by this increased quantity of blood, and a state of indirect debility of the brain follows. In the next place, as all mental perceptions, and their corresponding sensorial impressions become more vivid by repetition, and as all sensorial impressions capable of being transmitted

mitted to the irritable parts of the body are to be considered as stimuli to these parts; and further, as all irritable parts also become more disposed to action by repetition, and as action necessarily exhausts a great deal of the vital principle, we see the reason why all exertions of the mental faculties, when too long continued, or too violent, produce fatigue, and debilitate the corporeal part of the animal.

The bad effects of this corporeal affection are often exhibited in a very powerful manner on many of the viscera essential to the healthy state of our frame. The force of the heart and arteries is diminished, and the various secretions, therefore, are often lessened; the excretions are often retained longer than they ought to be, and, like useless and foreign bodies, they irritate, and cause disorder in the parts in which they are contained; respiration becomes slower, and confined, the organs of digestion are impaired, and digestion and chylification are injured; hence a sense of languor, anxiety, dejection of mind, peevishness, spasmodic affections, and all the consequences

quences of a debilitated fibre, and disordered state of nerves ensue.

The difference between the exercise of the body, and that of the mind, consists in this ; the former, although it also exhausts the strength of the muscular fibre, and the energy of the nerves, yet proves the indirect cause of these principles being more quickly and perfectly restored than they otherwise would be, for, by supporting the activity of the heart, and arterial system, they lay the source of a more quick and perfect supply of the various parts and principles which were wasted by fatigue. But the over-exercise of the mind weakens the body both *directly* and *indirectly* ; directly, by exhausting the principle of irritability, and the energy of the nerves ; and indirectly, by allowing the heart and arterial system, and the stomach and chylopoetic viscera, to become debilitated for want of a due quantity of bodily exercise.

Another rich source of mischief is the effects which the active employment of the powers of  
the

the mind, which conspire in the process in composition, have on some people, by diminishing their natural quantity of sleep.

One would naturally suppose, from a knowledge of the laws of irritability, that, when once bodily fatigue was induced to a certain degree, by corporeal exercise, or by exertion of the mind, sleep would naturally follow. But this only happens when the mind is but little or not at all engaged. After any strong and long-continued exertion of thought, imagination, or memory, &c. the associations which have been excited still continue to act for a considerable time after the voluntary efforts of attention have been given over; just as when, after having fixed our eyes upon a strong light for a considerable time, and then voluntarily excluding the external object, by shutting them, the figure of impression still continues upon our retina, and keeps the mental perception awake. Every person who has been employed in any very active operation of the mind, and has continued it much beyond his usual hour of sleep, must have found

found that it was impossible to prevent the association of ideas which had been excited from being renewed in his mind again and again for some hours afterwards, notwithstanding every effort to break the chain of thought. The celebrated BOERHAAVE mentions, that having imprudently indulged himself in intense thought from morning till night, on a subject of a serious nature, he did not close his eyes for six weeks after, during all which time he was perfectly indifferent to every thing. This state was succeeded by universal pain, which he considered as a sign of the animal spirits being renewed, and returning to their wonted channels, and diffusing themselves over his whole body.

In ZIMMERMAN'S celebrated work on Experience in Physic, there is a very remarkable case mentioned, which exhibits the powerful and dangerous effects of intense study. As it is applicable to the present subject, I add a translation of it. "A young gentleman, "a native of Switzerland, gave himself wholly "up to the intense study of metaphysics. In

“ a short while he began to experience an  
“ inertness of mind, which he endeavoured to  
“ shake off by renewed efforts of application ;  
“ this increased the complaint ; and he re-  
“ doubled his exertions. This kind of con-  
“ test lasted six months, during which the  
“ disease increased so fast, that both body and  
“ mind suffered from it. The health of the  
“ body was soon restored by proper remedies,  
“ but the mind and senses became gradually  
“ more and more impaired, until they at last  
“ were subjugated by a complete stupor.  
“ Without being blind, he appeared not to  
“ see, without being deaf, he seemed not to  
“ hear ; without being dumb, he did not  
“ speak. In other respects he slept, drank,  
“ ate without relish, and without aversion,  
“ without asking to eat, or without refusing  
“ to do so. He was deemed incurable, and all  
“ remedies were laid aside ; this state conti-  
“ nued a whole year. At the end of this time  
“ some one read a letter to him with a very  
“ loud voice, he was agitated, and emitted a  
“ murmuring complaint, and applied his hand  
“ to his ear ; this was taken notice of, and  
“ the

“ the person read still louder ; he then gave a  
 “ cry, and exhibited signs of the most acute  
 “ suffering ; the experiment was again tried,  
 “ and his hearing was re-established by pain.  
 “ Every other sense was successively excited on  
 “ a similar principle, and in proportion as he  
 “ regained the use of them, the stupidity ap-  
 “ peared to be diminished ; but the prostration  
 “ of strength which followed, and the pain he  
 “ sustained brought him to the brink of the  
 “ grave ; at last, nature, without the aid of me-  
 “ dicine, gained a complete victory. He re-  
 “ covered his wonted powers, and is at this  
 “ day one of our first philosophers.” See  
 Tissot’s work already mentioned, for a number  
 of other very remarkable cases of this nature.

The increased action of the blood-vessels of  
 the brain by keeping that organ in a constant  
 degree of tension, and the sensorial impres-  
 sion, from the intensity of thought, becoming  
 remarkably vivid, act like strong and power-  
 ful stimuli, and induce a degree of excite-  
 ment nearly approaching to phrenitis.



If the causes of this state occur frequently, a real and permanent delirium is often the consequence; for the mind of a person then becomes intirely occupied by a certain class of notions, which, from the sensorial impressions acquire a degree of vividness that is unnatural to any perception, except those derived from some of the external senses.

When once the objects of thought have acquired this degree of force, they obstruct the usual impressions derived from external objects, and this circumstance increases the belief in the existence of his illusion.

This very dangerous state of mind is always increased, *ceteris paribus*, in proportion as the objects of study are few in number; for when they are numerous, and do not belong to one subject only, the habit of easily passing from one chain of associated ideas to another increases; and thus all the faculties of the mind have a more equal degree of exercise.

Whether

Whether or not this hypothesis be received as a satisfactory explanation of the origin of this singular aberration of mind, the fact is undoubted, that men who are too much addicted to the exercise of that kind of fiction which is necessary in the composition of what are called works of imagination, often pass altogether from the real world into an ideal one, where they take the inspirations of fancy for existing form, and illusions for real substance. Those simple acts of judgment which relate to the common occurrences of life, and which constitute what is well denominated *common sense*; being much neglected by such people, the aberrations of reason are seldom rectified by themselves, and indeed they do not listen with pleasure to the reasoning of others on their situation.

To many people it appears to be an inexplicable mystery how a person believes any thing to have a real existence which is not present to the external senses. This is in a considerable degree explained by what has been already advanced in several parts of the work;

work; but there is another observation relative to the same subject which merits attention. It is this: that the *figure of impression* which the vivid ideas produce on the brain is, by a necessary law of the animal œconomy, already explained, conveyed to the extremities of those nerves of external sense by which the object, had it been a real one, would have been naturally received. But when any impression is made upon that part of our nervous system, we always refer it, by a species of judgment derived from our experience, to something without us. When a person of a full habit of body stoops down, so as to cause a slight congestion of blood in all the vessels of the head, the blood-vessels of the retina partake of this turgidity, and the preternatural distension produces an unusual impression on that nerve. The person, therefore, believes he sees a number of black spots and filaments before his eyes, and concludes that they have a real existence without him, until he is made acquainted with the nature of the phenomenon. When we press strongly with our finger on our closed eye, we think we see a luminous spot

spot before it. Whence, then, is the difficulty of supposing that the impression of any ideal object, transmitted from the brain to that nerve, should produce a similar conviction on our mind?

A few examples, illustrative of this kind of disease to which genius is so much exposed, remain to be added.

The first which I shall mention is taken from BONNET, the second is that of a justly celebrated author, distinguished for the brilliancy, richness, and elegance of his imagination; I mean the immortal TASSO.

“ I know a man,” says BONNET, “ of great  
“ respectability, strict veracity, a sound understanding, and a good memory, and faculty of judging, who, while quite awake,  
“ and without any external cause whatever, sees, at times, various figures of men and  
“ women, birds, chariots, buildings, &c.  
“ They appear to him to be in motion; he  
“ sees them approach towards him, recede  
“ from

“ from him, and totally disappear. Mansions  
 “ rise suddenly before his eyes with all their  
 “ external and appropriate decorations. At  
 “ times the appearance of the paper in his  
 “ room seems at once to be changed, and, in-  
 “ stead of the usual figures which are on it, a  
 “ number of fine landscapes appear to his  
 “ view. Some time after, not only all the  
 “ landscapes and paper, but the furniture also  
 “ disappear, and the bare walls present them-  
 “ selves to his eyes. But I should lose myself  
 “ in attempting to describe all these phenome-  
 “ na ; my object being solely to mention them.  
 “ All these objects appear to him in such per-  
 “ fection, and make as strong an impression on  
 “ him as real objects.” *Subtil*, p. 314. BONNET  
 adds, that the operation for the cataract had  
 been successfully performed on him several  
 years before this singular delusion commenced.  
 At the time that BONNET wrote the case, he  
 says, that the left eye was almost useless, owing  
 to the person's having greatly weakened it by  
 too much reading, but the right one was to-  
 lerably good.

The following is the case of TASSO.

“ At

“ At Bisaccio, near Naples, MANSO had an  
“ opportunity of examining the singular ef-  
“ fects of TASSO’s melancholy, and often dis-  
“ puted with him concerning a familiar spirit,  
“ which he pretended conversed with him;  
“ MANSO endeavoured in vain to persuade his  
“ friend that the whole was the illusion of a  
“ disturbed imagination; but the latter was  
“ strenuous in maintaining the reality of what  
“ he asserted, and to convince MANSO, de-  
“ fired him to be present at one of the myste-  
“ rious conversations. MANSO had the com-  
“ plaisance to meet him next day, and while  
“ they were engaged in discourse, on a sudden  
“ he observed that TASSO kept his eyes fixed  
“ on a window, and remained, in a manner,  
“ immoveable: he called him by his name,  
“ but received no answer; at last TASSO cried  
“ out, ‘ There is the friendly spirit that is  
‘ come to converse with me; look! and you  
‘ will be convinced of the truth of all that I  
‘ have said.’

“ MANSO heard him with surprize; he  
“ looked, but saw nothing except the sun-  
“ beams

“ beams darting through the window ; he cast  
“ his eyes all over the room, but could per-  
“ ceive nothing ; and was just going to ask  
“ where the pretended spirit was, when he  
“ heard Tasso speak with great earnestness,  
“ sometimes putting questions to the spirit,  
“ sometimes giving answers ; delivering the  
“ whole in such a pleasing manner, and in  
“ such elevated expressions, that he listened  
“ with admiration, and had not the least  
“ inclination to interrupt him. At last the  
“ uncommon conversation ended with the  
“ departure of the spirit, as appeared by  
“ Tasso's words, who, turning to MANSO,  
“ asked him if his doubts were removed.  
“ MANSO was more amazed than ever ; he  
“ scarce knew what to think of his friend's  
“ situation, and waved any further conversa-  
“ tion on the subject.” HOOLE'S *Life of Tasso*,  
p. 48.

Since the peculiar ideas which in such people gain that extraordinary force which has been described, generally arise from accidental circumstances, such as the delight a person takes  
in

in one subject of thought or study rather than another, it is evident that it becomes impossible to enumerate the various strange notions which they may entertain. There is, however, one kind which demands particular attention, not because it is essentially different from the others, but because of the baneful effect it produces in society, when unfortunately it occurs in men of learning: I allude to the firm belief of some men, who are persuaded that they have been taken up into heaven, admitted to the presence of the Almighty, and are selected from the multitude, as the happy means of explaining the more mysterious parts of religion. The learning of such men enables them to describe, in the most enticing colours, the visions which they are convinced they have had; and the enthusiasm which naturally accompanies such a belief of divine favor, gives them a degree of activity in propagating their opinions, which no other cause could perhaps produce. From the first moment that a person begins to doubt whether such phantoms of the imagination be realities or not, from that moment is the disease confirmed;



firmed; vanity and pride, which such people generally possess in a considerable degree, predispose them to the belief, for it is surely not unnatural to think that a person to whom is manifested such divine partiality, should consider himself as inspired, or, at least, as fitted to be the instructor of mankind. SWEDENBORG, and others, have been variously considered. By some, they are looked on as saints, by others, as artful hypocrites, who wished to establish a sect from interested motives. There does not appear, however, any foundation for the last opinion. They themselves are deluded; and as they have the wants and common passions of men, and as their delirium is confined to one particular train of thought, it is natural to imagine that they should, like other people, yield to the influence of such sights, and the passions which they give birth to.

The dreams of SWEDENBORG, which have given birth to a new sect in this country, are not more singular than those of a beautiful Spanish lady, who was the founder of a convent, and who was sanctified after her decease:

I allude

I allude to that lovely, mild, and most uncommon fanaticist, St. THERESA. (See Appendix, No. 6.)

A circumstance which tends to impose on the judgment of many, in regard to such patients is, that the disease is rare, and happens only to very uncommon characters; it is not so rare, however, but that many cases of it occur: but it does not always happen that those who are thus inspired can write an intelligible description of what they have seen, and this circumstance, therefore, must necessarily add to the high estimation of those who distinguish themselves by an accurate account of their celestial visions.

That SWEDENBORG, and Saint THERESA are not the only persons who have visited heaven *while on earth*, might be sufficiently proved by many cases. The following is an extraordinary one, because it shews the influence of the belief, without the desire of making converts. It is written by the lady herself, who saw the celestial fights, and it was sent to the editors of the Psychological Magazine, by a respectable

ble clergyman of Augsburg, of the name of MULLER, who accompanied it with a letter. In this letter he says, the woman who drew up the following relation (a person in other respects of good understanding) persists, most strenuously, that she saw and heard every thing which she describes.

“ She is of a tranquil, steady character, and  
“ has no other kind of superstitious belief.”  
he adds, that he has many other papers of her’s relating to the same subject, which he offers to send to the editors of this magazine, if they choose to ask for them.

The person alluded to, commences her narration with a kind of confession of faith in the “ *Lord of Lords*,” for the singular and gracious condescension he has shewn her, and then she begins the following account of what she has seen and heard.

“ In the fourth year of my life, when I was  
“ engaged only with childish amusements, I  
“ took the folio bible in which my late sister  
“ (who

“ (who was then in the street with her maid)  
“ had been reading. This book I took from  
“ the table, and rolled it with my hands and  
“ feet to a bank, where I had been sitting,  
“ and I then placed my feet on it, that I  
“ might the more easily dress and undress my  
“ little doll.

“ I had scarcely taken my place above a  
“ minute, when I heard a voice at my ear say,  
“ Put the book where you found it; but as  
“ I did not see any person, I did not do so.  
“ The voice, however, repeated the mandate,  
“ that I should do it immediately, and, at the  
“ same time, I thought somebody took hold  
“ of my face. I instantly obeyed, with fear  
“ and trembling, but not being able to lift  
“ the book upon the table, I called the ser-  
“ vant maid to come quickly and assist me.  
“ When she came, and saw that I was alone,  
“ and terrified, she scolded me, as nobody  
“ was there.

“ When I grew up in years, it was my most  
“ earnest wish, and greatest delight to know  
“ what

“ what that book contained ; and I am not  
“ ashamed to confess I have read it twice from  
“ beginning to end. The first time, my un-  
“ derstanding being weak, I did not suffici-  
“ ently comprehend it. But afterwards it  
“ became more intelligible to me, by often  
“ hearing sermons, and reading religious  
“ books.

“ In my seventh year my sister and I were  
“ playing as children do, when (it was then  
“ summer) a great clear flame appeared to  
“ come in through the chamber door, in the  
“ middle of which was a long, white light,  
“ about the size of a child of six weeks old ;  
“ it remained about half an hour in the same  
“ situation, near the stove, and then went out  
“ again by the room door ; the white light  
“ first, and the flame after it. We found  
“ nothing in the adjoining room but my fa-  
“ ther and mother, who were employed :  
“ they saw nothing, and scolded us accord-  
“ ingly ; but it always remained in our me-  
“ mory.

“ 1770. My husband and I left Straßburg,  
“ on account of the dearth of provisions.  
“ While we were on the road, there appeared  
“ to me, about half past five o’clock in the  
“ morning, our blessed Saviour, in a dream,  
“ who spoke half an hour with me; I did not,  
“ however, pay attention to what he said, for  
“ joy prevented me, and I only thought of  
“ what I should say to him. After he had  
“ done speaking, he disappeared.

“ 1771 In the month of December, I con-  
“ stantly received disagreeable letters from  
“ my husband, who was then in Augsburg,  
“ while I was at my native home. This  
“ conduct on his part caused me to take  
“ the resolution of desisting from prayer. I  
“ thought the Lord had forsaken me, and on  
“ the Sunday evening following, I thanked  
“ God, once for all, and went to bed.

“ I awakened towards morning, but did  
“ not know what time it was. At once, it  
“ appeared, to my great astonishment, to be  
“ broad day-light, and at my bedside sat a  
Vol. II. E “ heavenly

“ heavenly human figure, in the shape of a  
 “ man, about sixty years old, in a blueish  
 “ robe. His countenance was like the clearest  
 “ red and white crystal, his hair bright and  
 “ fair; he looked at me with tenderness, and  
 “ said, *Proceed, proceed, proceed* \*. How am  
 “ I to explain that? thought I to myself.  
 “ Immediately it was explained to me by a  
 “ young person, also as beautiful as an angel,  
 “ who sat on the opposite side of my bed;  
 “ Proceed in prayer,” he said, “ proceed in  
 “ faith, proceed in trials.”

“ While they thus spoke to me, a light like  
 “ that reflected from the river Diele, seemed  
 “ to shine in the apartment. It moved up  
 “ and down, and then disappeared, upon which  
 “ I felt as if some person pulled out the hairs  
 “ of my head, but the pain was to be borne.  
 “ The light came again, and the pain ceased

\* *Halt an, halt ein, halt aus.* I cannot recollect in the  
 English language any three words between which there is  
 the same shade of difference as in these German ones, and  
 which at the same time are, as in the present instance, to be  
 considered as nearly synonymous.

“ intirely ;

“ intirely ; it again disappeared, and I felt  
 “ as if the flesh on my back was torn from  
 “ the bones by pincers ; the light came again,  
 “ and I was then better. It again went  
 “ away, and I felt as if my shoullder blades  
 “ were torn from each other ; my heart, also,  
 “ felt, as if it were torn out of my breast, and  
 “ laid between my shoullders, where it died \*.  
 “ I thought these must be my last moments ;  
 “ and I then beheld the devil beside the young  
 “ angel. He came from behind the bed, with  
 “ his back foremost. All that I saw of him,  
 “ however, was his arm, a tail about two  
 “ spans thick, which resembled a serpent, and  
 “ his neck, and the back part of his head.  
 “ I had not time to examine him minutely,  
 “ for the angel pushed him away with his  
 “ elbow.

\* Although we have no information of the state of this person's health, it appears very probable, from this part of the history, that she was afflicted with epilepsy, or some similar convulsive disorder ; the aura epileptica in an enthusiastic mind like hers, might be referred to a divine light. The pulling of the hairs, and tearing of the flesh, are intelligible enough.



“ The light came again, and both persons  
“ looked mournfully at it. The young per-  
“ son then said, ‘ Lord, this is sufficient ;’  
“ and he repeated these words three times.  
“ Whilst he repeated them, I looked at him,  
“ and beheld two large white wings on his  
“ shoulders, and therefore I knew him to be  
“ an angel of God. The light immediately  
“ disappeared ; the two figures vanished ; and  
“ the day was suddenly converted into night ;  
“ my heart was again restored to its right  
“ place, the pain ceased, and I arose. It was  
“ then five o’clock in the morning.

“ 1772. Previous to my leaving Landau, I  
“ was again graciously favoured with a sight of  
“ our Saviour. It was about five o’clock in  
“ the morning, and he was white in person  
“ and in dress.

“ 1773. After I left my native country, and  
“ returned to my husband ; he made my life  
“ so bitter to me that I thought only of death.  
“ I then formed a resolution extremely con-  
“ trary to my natural disposition. I deter-  
“ mined

“ mined to quarrel with him, and oppose  
“ him by violent means ; one of us must die,  
“ I thought, or else my whole life will be  
“ spent in this disgusting union ; and it is said  
“ in the holy writings, that this life of misery  
“ is not worth the happiness we are to expect  
“ hereafter. My sorrows increased, and I  
“ went to bed in tears.

“ I awakened about four o'clock in the  
“ morning, and imagined myself in my fa-  
“ ther's house, on the river Diele. I looked  
“ up into heaven, and saw a water-dog walk-  
“ ing on the firmament.

“ As soon as it had passed by, the skies de-  
“ scended to me, and my eyes were changed  
“ on purpose to see new sights, for I saw  
“ many hundred thousand miles. The man-  
“ sion of God stood in the centre, lightly en-  
“ veloped in clear blue clouds, and surrounded  
“ with a splendor of such various colours as  
“ are unknown to the world below. In each  
“ colour stood some millions of men enrobed  
“ in garments of the same colour with that in  
“ which

“ which they stood ; for instance, those who  
“ stood in red, were clad in red, and those  
“ in the yellow, had robes of yellow ; and the  
“ faces of all these men were turned to the  
“ mansion of the Almighty. And there came  
“ out of the mansion a most lovely female,  
“ clothed in the brightest lustre of heaven,  
“ and a crown on her head. She was accom-  
“ panied by three angels, one on her right  
“ hand, and one on her left, the third walked  
“ beside her, and pointed to the crowd who  
“ stood in the splendid colours.

“ In a minute the heavens were closed, and  
“ again opened as formerly, but the woman  
“ and angels were not to be seen : but our  
“ blessed Saviour came out of the mansion,  
“ followed by a long train of attendants, and  
“ he descended through all the splendor I have  
“ described. The Lord and his attendants all  
“ looked smilingly upon me. They were  
“ dressed in white, and wherever they went  
“ was a clear white. When he approached  
“ me near enough, that I could touch his  
“ foot, I was frightened, and awoke. It was  
“ then

“ then half past four o’clock ; I arose, and  
“ considered that my present life was not to  
“ be compared with such joys.”

Somewhat analogous to this case is that of the Rev. JOHN MASON, a clergyman of Water-Stratford, near Buckingham. This pious man evinced a very sound judgment on every subject but one, and that one was of such a nature as to make him be justly ranked in the class of celebrated visionaries. He was perfectly persuaded, in his own mind, that he was the Elias who was destined to announce the coming of Jesus, who was to begin the Millennium at Water-Stratford.

“ MASON was observed to speak rationally  
“ on every subject that had no relation to his  
“ wild notions of religion. He died in 1695,  
“ soon after he fancied he had seen his Sa-  
“ viour, fully convinced of the reality of the  
“ vision, and of his own divine mission.”  
*Granger’s Biographical History of England*, Vol.  
IV. p. 207.

It is by no means easy to discover the circumstances which first give rise to the peculiar imaginary objects in the reality of which such men believe. In other cases, however, it is evident enough. **BENVENUTO CILINI**, whose name is well known to every man of taste, was endowed with an uncommonly vivid imagination, as appears conspicuous in various parts of the life he has written of himself. Another predominant feature in his character was vanity; and to the powerful influence of these two causes I am inclined to believe that singular illusion was owing, which affected him, and which caused him to believe that he was surrounded by a sort of glory.

“ This resplendent light,” he says, “ is to  
“ be seen over my shadow, till two o’clock in  
“ the afternoon, and it appears to the greatest  
“ advantage when the grass is moist with dew;  
“ it is likewise visible in the evening, at sun-  
“ set. This phenomenon I took notice of  
“ when I was at Paris, because the air is ex-  
“ ceedingly clear in that climate, so that I  
“ could distinguish it there much plainer than  
“ in

“ in Italy, where the moists are much more  
“ frequent ; but I can see it there, and shew  
“ it to others, though not to so much advan-  
“ tage as in France.”

It must be evident that when such an aberration of mind as I have described once prevails, the person is at all times apt to overstep the boundary of reason, not only on every subject connected with the prevailing notion, but also from the influence which the passions, when accidentally excited, must have on his conduct. Many of the murders and acts of suicide which religious enthusiasts commit, are so many proofs of the truth of this position. That murder often springs from this principle, the assassination of HENRY IV. of France, the massacre of the Hugonots, and the many victims which fell a sacrifice to the religious frenzy of MARY, of England, sufficiently confirm.

Religious enthusiasm gives birth to two irresistible desires, both of which generally terminate in suicide: the one a deep melancholy, the other a very strong desire of eternal happiness.

pinefs. The first is, unfortunately, a very common cafe in this country, efpecially among the lower orders of Methodifts. The pain which accompanies this melancholy becomes infupportable ; a ftate of defpair follows, and the defire of relief which arifes as a natural confequence, leads to the completion of the crime. Of this, more will be faid in the chapter on Grief.

In the other cafe, there is no defpair, the perfon has an anxious longing for a happinefs which he believes he is deftined to enjoy as foon as he departs from this world ; he cannot brook the delay, and therefore yields to the urgency of the internal impulfes.

Religious enthufiafm has a third termination which is in abfolute frenzy, and in which the perfon, like all lunatics, yields to the paffions which are accidentally excited in his mind. The following cafe offers an awful warning to thofe who are entrusted with the education of youth, how they allow their imaginations to be exalted by fubjects which are altogether

altogether beyond the reach of human understanding. It shews the necessity of confining men of a warm fancy to such studies as give exercise to reason, rather than to wild and extravagant speculation. The case is extracted from Vol. VII. of the *Psychological Magazine*, and is written by Professor GRUNER, of the university of Jena, a gentleman distinguished for his learning, and the excellence of his numerous writings. The professor says, that the facts which are related by him, are taken partly from his own personal knowledge of the culprit, and partly from the register of the court of justice.

“ Among the students of theology at the  
“ university of Leipzig, there was one of the  
“ name of RAU. His studies were chiefly di-  
“ rected to the Revelations of St. John, in the  
“ reading of which he took much delight.  
“ He did not at first choose to venture alone  
“ in this labyrinth of holy mystery, and he,  
“ unfortunately, selected as his guides, two  
“ celebrated enthusiasts. BENDEL and CRU-  
“ ZIUS were his torch-bearers.

“ When



“ When his imagination became heated by  
“ the sublime pictures which were presented  
“ to his mind, he began to try if he himself  
“ could not develope the visions of the holy  
“ faint. He thought himself happy in his  
“ first attempts, and his imagination being  
“ once on fire, he could not discover that his  
“ explanations were gratuitous and unfound-  
“ ed. He arrogated to himself the praise of  
“ uncommon penetration ; and at last he be-  
“ lieved himself to be inspired. The natural  
“ consequence was, that he could not endure  
“ those who differed from him in opinion ; he  
“ neglected the common duties of his situa-  
“ tion, and became passionate and morose.  
“ He thought himself superior to the rest of  
“ mankind, because the treasures he had found  
“ in the sacred writings seemed to be con-  
“ cealed from all but himself. It was not,  
“ therefore, to the natural powers of his  
“ understanding, he imagined, to which he  
“ was indebted for these lights, but some su-  
“ pernatural gift with which he was endowed.  
“ Every one knows, however, that it is the  
“ duty of him who is preternaturally enlight-  
“ ened,

“ ened, to disperse the rays of his wisdom as  
“ wide as possible. No sooner did he find the  
“ divine call within him, than he preached his  
“ opinions openly. The last sermon he ever  
“ delivered ended with these remarkable  
“ words : ‘ He who believes not in witches,  
“ does not believe in the devil ; he who be-  
“ lieves not in the devil, does not believe in  
“ God ; he who believes not in God shall be  
“ damned.’ Upon this the magistrates of  
“ the town wished to confine him in some  
“ place of safety, but at the entreaties of his  
“ father, he was permitted to remain under  
“ his custody.

“ RAU began to be ashamed of what he had  
“ done, and refused to go out of the house.  
“ He at last appeared, however, to grow bet-  
“ ter, and was prevailed upon to take short  
“ walks ; and he expressed to some friends  
“ who visited him, a strong desire of being  
“ restored to his wonted powers of mind, in  
“ order that he might recommence his stu-  
“ dies.

“ On the 4th of August, 1779, being the  
“ day after his friends visited him, the neigh-  
“ bours were much alarmed on hearing RAU  
“ abuse his father. Upon knocking at the  
“ door, he opened it, and allowed them to  
“ come in ; the father lay on the floor, welter-  
“ ing in his blood, murdered by his son, who  
“ had stabbed him in fifteen different places,  
“ and had cut his throat. RAU walked back-  
“ wards and forwards to the window, agitated  
“ alternately by contrition, the consciousness  
“ of his crime, and ebullitions of insanity. At  
“ one moment he accused himself of having  
“ committed so horrible and unpardonable an  
“ offence : at another, he denied his having  
“ murdered his father, saying it was an old  
“ Jew, and a Turk, whom he had killed.

“ Upon being asked in the court of justice  
“ what his name was, he answered, that he  
“ believed he had never been baptized, neither  
“ did he consider the man whom he had killed  
“ as his true father, because he did not re-  
“ semble him. Before he went out of the  
“ court, he said, that he formerly had studied  
“ the

“ the Revelations of St. John, but that now  
 “ he had nothing to do with them ; yet he  
 “ never shewed any marks of contrition while  
 “ in prison, nor did he utter any of his former  
 “ opinions.

“ His conduct was outrageous, and exhi-  
 “ bited pride and contempt for all mankind.  
 “ During a violent storm he broke out into  
 “ the following exclamation : ‘ The wild  
 ‘ prince is coming, I know the fellow well,  
 ‘ for I have heard him often.’

This is not a very common case, but it is  
 by no means uncommon for people whose  
 imagination has been exalted by such objects  
 of study as give little or no exercise to judg-  
 ment, to conceive such a firm conviction in  
 the reality of their thoughts, as to cause them  
 to be justly considered as delirious people.

Tissot relates the following cases : “ J’ai  
 “ vu une femme qui avoit paru très sensée  
 “ jusques a l’âge de vingt-cinq ans, qui s’étant  
 “ par malheur attachée a la secte de *Hernbuttes*

“ ou *Moraves*, s’enflamma, se pénétra telle-  
“ ment de l’amour de Jesus Christ qu’elle ap-  
“ pelloit son agneau, qu’elle ne put plus s’oc-  
“ cuper que de cette seul idée, et sans autre  
“ cause, devint imbecille dans l’espace de  
“ quelque mois; elle ne conserva d’autre sou-  
“ venir que celui de son ami. Je la vis pres-  
“ que tous les jours pendant six mois, et dans  
“ toutes les visites que je lui fis, je n’obtins  
“ pour réponse à mes questions que ces seuls  
“ paroles, *mon doux agneau* qu’elle répétoit de  
“ demi heure en demi heure, les yeux baissés.  
“ Elle vecut ainsi pendant six mois, et mourut  
“ ensuite de deperissement. Mais sans aller  
“ chercher des exemples plus loin, nous avons  
“ vu etudier dans cette academie, il n’y ce  
“ pas long-tems, un jeune homme de merite  
“ qui s’étant mis dans la tête de decouvrir la  
“ quadrature du circle, est mort fou a l’hotel  
“ Dieu a Paris.”

The cases of delirium which have been pro-  
duced by intense application to such subjects  
of study as give an extraordinary degree of  
force to imagination, are so numerous, that  
this

this chapter might be easily swelled to more than twice its extent by an enumeration of the principal ones. But those which have been brought forward are surely quite sufficient to prove the melancholy truth of the hypothesis laid down, that representations of the mind, when frequently renewed by acts of imagination, at last acquire a degree of vividness which surpasses those derived from external objects; and as the principal quality of a mental perception; or representation, which makes us believe in the reality of the object, or objects which it represents, is the clearness of its parts, it is not wonderful that men of genius, who often confine their attention to one branch of study, should be more exposed to such illusions than any other class of people.

Before these kind of deliria occur, the bodily health of the person generally suffers, and this disordered state of health is very similar to that which arises from a sedentary life, and from the effects of grief, which will be described hereafter.

## CHAPTER VIII.

## ON VOLITION, AND ITS DISEASES.

*Distinction to be observed between the ideas which excite bodily action, and those which terminate in some mental operation. Motives of action, what they are; classification of them. Superiority of motives of action, and their sensorial impressions over physical stimuli producing pain. How far a person may be said to be a free agent. How one idea produces a complex bodily action. How several motives of voluntary action operate efficaciously at one and the same time, and how one train of thought only can be present to the mind. The diseases of volition. Hesitation and stuttering accounted for, and traced to their origin. What circumstances are necessary in order that a motive of action should produce its full corporeal effect; and what happens when these are deficient. Cases illustrative of the various axioms laid down.*

**T**HERE are certain ideas which merely excite some one or several of the mental faculties

ties into action, and produce little or no effect on the body; there are others peculiarly fitted to excite the principle called the will, and by so doing occasion the movement of several parts of our corporeal frame. These last ideas are commonly called *motives* of action, by philosophical writers. What are these motives? In what respect do they differ from those which only give exercise to the faculties of the mind, such as memory, imagination, or judgment?

The term motive of action is to be considered as a generic one, comprehending various species; for, although all ideas which are so called may be reduced under one class, in regard to their general effect, that is, inasmuch as they all are stimuli, which excite the will, yet they differ from each other in many particulars.

Observation teaches us that the will is excited



1st. By corporeal sensations of pleasure and pain.

2dly. By the passions.

3dly. By certain judgments, or conclusions, which arise from the comparing of thoughts.

When we observe the two last classes of causes more narrowly, and reflect on their nature, we find reason to believe that the peculiar ideas of the passions and judgments which excite volition, all act upon the principle of pleasure or pain, that is, they are either agreeable or disagreeable, occasioning desires or aversions; for in fact it is always some cause of desire or aversion which makes us commit a voluntary act. A complete proof of this position cannot arise but by analyzing human action in general, and tracing it to its source. As this is attempted in the next chapter, it may either be read at present, or the conclusion must, for the present moment be acceded to.

One would imagine that if the mind and brain were one and the same thing, as Dr. PRIESTLEY, and some others suppose, it would then follow that many physical causes of pain would overcome the agency of any thought, inasmuch as bodily pain consists in a forcible disorganization of the elongations of the substance of the brain itself; for this is an effect we cannot suppose an idea capable of producing.

It is well known, however, that the ideas which constitute our desires and aversions, often overcome the most cruel tortures which can be inflicted on the body. A surgeon is often under the necessity of separating from the body of a tender female, the most acutely sensible part of her whole frame; many considerable nerves are divided, stretched, and often compressed, yet a thought prevents a single groan from being uttered. Dr. ROBERTSON, in his History of America, assures us that the trials which the candidates for royalty, among several of the native American tribes, subject themselves to, consist

consist in such tortures as a person of this country deems it almost impossible for the human body to sustain ; they are beaten until they are disfigured ; they are stung, and bitten with poisonous insects, and exposed to suffocating vapours, till they are almost dead. Some of them actually die during the trial ; but, if they utter a groan, they are judged to be unworthy of the command of a great and brave people.

The conclusion to be drawn from these facts is, that the sensorial impression which thought occasions, is often a more powerful stimulus to volition than the sensorial impression, which arises from the laceration of the nerves ; but the question is, what is the nature of this power which produces this sensorial impression. We say it is a *stronger* one than the external agent ; our notion of greater or less strength is derived from the agency of physical causes ; and having no absolute knowledge of mind, or of the nature of thought, we are apt to give way to our associated ideas, and believe that strength is the same thing in regard

gard to mind, as in regard to body ; and that, therefore, the mental causes of voluntary action are nothing else than mechanical causes ; but this is evidently a *petitio principii*, a mere supposition, derived from our limited knowledge of the agency of bodies, and our total want of knowledge of the nature of mind, and of its principles and faculties. We must remain satisfied with avowing total ignorance in regard to this matter, and at the same time guard ourselves against admitting any hasty conclusions drawn from a limited analogy.

In many cases, deliberation precedes voluntary action ; this gives rise to the idea that they are often related to each other as cause is to effect. The common conviction of mankind is, that we have a power of choosing between motives, or a liberty of acting, as it has been called. Every person who is but slightly acquainted with metaphysics knows that this doctrine has been contested with much ingenuity, and often with much unbecoming acrimony. This is not the place to recite the arguments which are brought forward in support of the opposite sides of the question ;

question ; and I shall therefore simply state my own opinion in a very few words.

Every man may be said to have liberty of action, inasmuch as he has the power of reflecting, or deliberating on the motives which incline him to do any thing, as well as on those which disincline him to do so. This operation of the mind, which is called choosing, is nothing else than a species of judgment, or the act of comparing perceptions. The causes which excite us to choose, are always sensations of pleasure or pain, or else they are desires or aversions ; for no man can have his will excited by things which do not interest him. The effects of habit do not belong to this inquiry. When once we have determined in favour of any one motive, or in other words, have drawn a certain conclusion, then this thought (the conclusion) by a secret influence, which is unknown to us, becomes the exciting cause of volition, and we act accordingly. Every motive which produces a voluntary act, may be said, in a figurative sense to have been the most powerful of all the other motives which were considered at the same time, and so far

far we may be said to act from a necessary impulse, but as we have the power of rejecting several motives in making our choice, so far we may also be said to have a free will. To return to our investigation.

The first thing to be developed is this : how complicated bodily actions arise from a single perception. It is of no consequence what instance we select for the sake of example.

When a person reads aloud, the preception of the words immediately excites our utterance of them. The pronunciation of a letter is a complex bodily action, in which various muscles of different parts are excited to contract by a single thought. When a person is about to pronounce a letter, the first thing he does is to take a quick inspiration, and then throwing the muscles of the larynx and glottis into action, and at the same time forcing out the air which he had inspired, he produces a sound ; this sound, according as it is interrupted or modified by the motion of the tongue, and lips, and other parts of the mouth, becomes the sign or expression of the letter ; thus, in pronouncing the

the letter *t*, the sound is interrupted by the application of the tip of the tongue to the palate, and in pronouncing the letter *r*, the peculiar sound is formed by the quick and repeated application of a greater portion of the point of the tongue to a greater portion of the palate, &c. Now as in these instances a great number of different muscles which obey the will, are thrown into action, it may be asked, How the representation of a single letter in the mind is sufficient to produce such a complicated bodily effect? Is it reasonable to suppose that a single perception should produce several sensorial impressions, each of which is conveyed to different muscles which are thrown into action.

In order to throw some light on this intricate question, I would observe, that although in adults a number of complicated bodily actions seem to arise immediately from one perception only, yet, in childhood, when these actions were first attempted to be performed, each particular act required a distinct effort of volition.

It is impossible for us to bring back to our recollection the consciousness of what passed in our minds when we first began to imitate the sounds of our parents and nurses ; but if any one, endowed with a common degree of observation, will pay attention to the efforts which a child makes when learning to pronounce a letter which requires a complicated action of the organs of speech, he will be, in a great degree, convinced of the truth of the above assertion ; or, what will probably bring more conviction to his mind, will be to attempt to perform any complicated bodily act which is new to himself. Thus, when a person first begins to play the violin, it requires a distinct effort of attention to hold it in a proper position ; another to place the fingers, another to draw the bow, another to prevent the bow from sliding to the fingers, or slipping over the bridge. This has been often taken notice of ; the conclusion to be deduced from it is, that in all such cases there is some peculiar process interposed between the original mental perception, giving rise to the voluntary act, and the action on the brain, by which



which the muscles are made to move. It would appear as if volition acted by peculiar impulses, and prevented the mental perception from immediately terminating in a corresponding sensorial impression, as the perceptions of recollection and imagination do. When we recall to our mind any of our friends, the perception seems immediately to renew in our eyes the figure of the person ; that is, the sensorial impression, corresponding to the perception, is, by a law of nature, transmitted along the nerves through which the impression was first received. The perceptions, however, which are to excite voluntary action, do not seem to operate in this way, but through the intervention of that principle of the mind, which we call the *will*, and which acts by peculiar impulses of its own upon the brain, or nervous fluid. It may be said, with justice, that these impulses are so many distinct stimuli, the impressions of each of which, when conveyed by the nerves to the various muscles, necessarily throw them into action.

A person

A person is always conscious of each of these distinct efforts, or impulses of the *will*, when he performs any new and unaccustomed combination of voluntary action; as when a person begins to play on any musical instrument, or to pronounce the words of a language which he is learning, for the first time.

Afterwards, when by frequent repetition, a kind of union or principle of concatenation has been established between all the motions which are necessary for the completion of the act, we become less and less conscious of the efforts employed, until at last the whole chain of bodily action seems to flow, as it were, from the first perception. These observations apply to all voluntary acts whatever; consciousness and attention at first accompany every new effort of volition; these are gradually diminished in proportion as the bodily actions are repeated, and at last they seem unnecessary to their production.

When once we have acquired this degree of facility in performing any assemblage of bodily actions,

actions, the mind is then open to a new train of thoughts, or even motives of action, to which it could not have attended before ; thus those who play with ease on the *piano forte*, or some other musical instruments, can play and speak at the same time ; but in order to do this they must be well acquainted with the piece of music they perform, and the subject of their conversation must not be such as to require any great effort of attention ; for in this case either the mental action, or the corporeal one ceases.

Between the ideas which excite bodily action, and those which give exercise to the mental faculties alone, there seems to be this essential difference, that several distinct series of the former may go forward at one and the same time, each producing its peculiar bodily movements, without in any way obstructing each other ; whereas it appears that we cannot admit of more than one subject of thought at a time. A person may be impelled by one train of ideas to walk, by another to perform certain operations with his hands, and by a  
third

third to speak; and all these acts, each arising from an impulse of this mental principle called volition, shall go on at the same time without impeding each other; but no man can entertain two subjects which excite memory, or imagination, or judgment, at one and the same moment of time.

It was necessary to state these facts in order to explain the nature of certain very curious diseases, which arise from an irregular action of this principle.

When two different shades of the same thought arise in quick succession, each of which necessarily has a tendency to affect the same set of nerves, the influence of the one is partially destroyed by that of the other, and an incomplete bodily action takes place. If a sudden thought makes a person who is in the middle of a speech imagine that there is a better expression for his thoughts than that which he is about to employ, the action is immediately interrupted, and he either stops, or stammers. When this

this complaint is slight, it is called *hesitation*, when great, *stammering*.

Every person is more or less exposed to the first of these affections. It may arise from various classes of ideas, but most commonly it is the offspring of doubt. Doubt often arises from great timidity; and where this feeling is strong, and natural to the constitution of some people, hesitation becomes a very early habit. In other cases it arises from accidental circumstances. There is one cause which produces it accidentally in many young people, which cannot be too much reprobated: I mean the injudicious severity of some parents and teachers. The fear of pain, and the fear of offending, and the fear of being found in fault, are often predominating features in the characters of young people, and most commonly in those who are endowed with what is figuratively called great sensibility of mind. If such a youth, while he is repeating his task, be regarded with a look, or threatened, as if it were expected he would fail, he commonly does so from mere apprehension, and this  
being

being often repeated he acquires the habit of hesitating. Such a defect, although it be a real evil, is seldom considered as a disease; and, unfortunately, few parents are sufficiently attentive to their children at the early periods of life to observe its approach. Many others have it not in their power to do so, owing to their children being separated from them, and shut up in seminaries, where the seeds of many other mental disorders are sown.

The origin of the distressing habit called stammering, generally occurs also in early life. It arises either from a species of doubt, or else from imitation, for it is in no case to be considered as natural to any constitution.

A very singular phenomenon concerning this impediment in speech is, that the hesitation is generally confined to the pronunciation of a few letters, and this is the cause why its effects are always heard and seen; for if it concerned whole words, a total stop would be put to speech. The person begins a concatenated chain of actions, or, to speak in plain language, he begins to pronounce the words which correspond to the

thoughts that are present in his mind, he arrives at one of the letters alluded to, and immediately a doubt arises in his mind how it is to be pronounced. I am at present speaking of the origin of the complaint—he then begins to pronounce in a different way, and the doubt again arises; he then returns back to the last pronounced syllable of the word, and repeats it, but upon coming to the letter, the doubt again arises, and gives a different direction to the sensorial impression, and he again attempts to speak another letter. He cannot stop, for he is in the middle of a word, the pronunciation of which he has been accustomed to conclude, and he therefore continues to struggle with it, till at last, owing to some accidental causes, which it is not easy to discover, he accomplishes its proper utterance.

Volition, now and then, fails to produce its full corporeal effect, from various diseased states of the brain, or nerves, or from the influence of some powerful sensorial impression, counteracting those of volition. In palsy, and in the night-mare, a person is conscious that he makes efforts of volition to move certain

tain parts of his frame, and yet cannot succeed, for the corporeal causes which produce these diseases, prevent the impulse from being conveyed to the parts intended to be moved, and consequently they cannot be stimulated into action by that principle.

In order that a motive of action shall produce its corporeal effect with due force and celerity, it is necessary that the nervous fluid be secreted in due quantity. If this is not the case, the impressions which are made by the action of this principle are too much weakened before they reach the muscular parts, and hence a feeble motion only occurs. This is the reason of that distressing indolence which many people who have long laboured under stomachic complaints, or other diseased viscera, or women afflicted with hysteria, frequently are subject to. Such people are constantly agitated between the desire of accomplishing many duties which they are conscious they ought to perform, and the painful bodily languor which oppresses them. The nervous



fluid being secreted in small quantity, the sensation of fatigue is soon induced, and the body therefore does not easily obey the dictates of the will.

All motives of action which arise immediately from external agents, act in general more powerfully than reflex thoughts or ideas, which are merely recalled to the mind. This does not require any illustration.

The longer any external object which yields a motive of action acts upon us, the more forcibly, and the more easily does it produce its effects. There is a very remarkable case narrated by the learned Dr. HERZ, in Vol. VIII. of the Psychological Magazine, which may be considered as an illustration of this position.

“ In August, 1785,” says the Doctor, “ I  
“ was called to an officer of the artillery, a  
“ man about forty years old, who, as I was  
“ informed, was seized with a palsy in consequence of cold, and violent anger. His  
“ tongue, hands, and feet, were lamed by the  
“ attack.

“ He

“ He was under the care of one of our first  
“ physicians, at whose desire I was consulted  
“ concerning the propriety of applying elec-  
“ tricity. From the time that this remedy was  
“ first employed, until the following year, I  
“ never saw him ; but he then sent for me  
“ again, as his own physician, he said, had  
“ deserted him.

“ I found him so much recovered as to  
“ have the complete use of his feet ; his hands  
“ also were stronger ; but in regard to his  
“ speech, the following very remarkable cir-  
“ cumstance was to be observed. He was  
“ able to articulate distinctly any words which  
“ either occurred to him spontaneously, or  
“ when they were slowly and loudly repeated  
“ to him. He strenuously exerted himself to  
“ speak, but an unintelligible kind of mur-  
“ mur was all that could be heard. The ef-  
“ fort he made was violent, and terminated in  
“ a deep sigh.

“ On the other hand, he could read aloud  
“ with facility. If a book, or any written  
“ paper,

“ paper, was held before his eyes, he read so  
“ quick and distinctly, that it was impossible  
“ to observe that there was the slightest fault  
“ in his organs of speech. But if the book or  
“ paper were withdrawn, he was then totally  
“ incapable of pronouncing one of the words  
“ which he had read the instant before. I  
“ tried this experiment with him repeatedly,  
“ not only in the presence of his wife, but of  
“ many other people. The effect was uni-  
“ formly the same.”

Dr. HERZ, who justly attributes this singular phenomenon to the superior strength, and to the longer duration of impressions received by the eyes, mentions another case which fell under his observation, and which has a great similarity to the one already cited. A young lady, who had fallen into a state of melancholy in consequence of deep grief, could not be made to pronounce a word, either by means of threats, or intreaties. But if a book was presented to her, and she was requested to read it, she did so with the facility of a person in perfect health. In some cases, the action of  
the

the will is totally checked by a diseased state of the brain and nerves, as is the case in that rare malady called catalepsy, of which the following is a very remarkable instance. It is extracted from the *Psychological Magazine*, Vol. V. part 3, page 15.

“ A young lady, an attendant on the princess of —, after having been confined to her bed for a great length of time, with a violent nervous disorder, was at last, to all appearance, deprived of life. Her lips were quite pale, her face resembled the countenance of a dead person, and her body grew cold.

“ She was removed from the room in which she died, was laid in a coffin, and the day of her funeral was fixed on. The day arrived, and according to the custom of the country, funeral songs and hymns were sung before the door. Just as the people were about to nail on the lid of the coffin, a kind of perspiration was observed to appear on the surface of her body.

“ It

“ It grew greater every moment, and at last  
“ a kind of convulsive motion was observed  
“ in the hands and feet of the corpse. A few  
“ minutes after, during which time fresh signs  
“ of returning life appeared, she at once  
“ opened her eyes, and uttered a most pitiable  
“ shriek. Physicians were quickly procured,  
“ and in the course of a few days she was con-  
“ siderably restored, and is probably alive at  
“ this day.

“ The description which she herself gave  
“ of her situation is extremely remarkable,  
“ and forms a curious and authentic addition  
“ to Psychology.

“ She said it seemed to her, as if in a dream,  
“ that she was really dead ; yet she was per-  
“ fectly conscious of all that happened around  
“ her in this dreadful state. She distinctly  
“ heard her friends speaking and lamenting  
“ her death at the side of her coffin. She  
“ felt them pull on the dead-clothes, and lay  
“ her in it. This feeling produced a mental  
“ anxiety which is indescribable. She tried  
“ to

“ to cry, but her soul was without power,  
“ and could not act on her body. She had  
“ the contradictory feeling as if she were  
“ in her own body, and yet not in it, at one  
“ and the same time. It was equally impossi-  
“ ble for her to stretch out her arm, or to  
“ open her eyes, as to cry, although she con-  
“ tinually endeavoured to do so. The inter-  
“ nal anguish of her mind was, however, at  
“ its utmost height when the funeral hymns  
“ began to be sung, and when the lid of the  
“ coffin was about to be nailed on. The  
“ thought that she was be buried alive was the  
“ first one which gave activity to her soul, and  
“ caused it to operate on her corporeal frame.”

The relation of the above fact is said, by the gentleman who sent the account of it to the editors of the Magazine, to have been obtained from the most respectable witnesses. Independently of the reflections which must naturally arise in the mind of every intelligent physician, from the singularity of the case, there is an awful warning to be drawn from it, which regards every person; I mean the danger

danger which arises from too early burials in the case of sudden, or unexpected death. This is a circumstance which has been often taken notice of, and which certainly receives additional interest from such cases as the one which has been just mentioned.

No other diseases can, in my opinion, be justly deemed diseases of volition. This declaration will probably excite surprise among the admirers of the *Zoonomia*, in which work all the spasmodic and convulsive disorders are considered by Dr. DARWIN as efforts of volition, and are ranked among the diseases of this faculty. To me it appears that all the spasmodic diseases arise from physical stimuli, applied either to the brain itself, or to distant parts of the nervous system, as in the case of worms, or acrid matters in the stomach and intestines, tumours, wounds, fractured bones, &c.; and, that the nervous impression of these stimuli, so far from exciting the will, counteracts its efforts, and represses, as it were, its action. The convulsions of epilepsy, and tetanus, for instance, are not, in my opinion, voluntary actions

actions excited for the purpose of counteracting pleasure or pain, as Dr. DARWIN imagines, but are involuntary acts of the external muscles, produced by the transmission and irritation of a powerful and unusual nervous impression; and I therefore coincide with SAUVAGE, VOGEL, HOFFMAN, and CULLEN, and all former writers of repute, in considering these as diseases which ought properly to be called involuntary ones. It would require more time than what I deem at present consistent with the plan of this work, to place Dr. DARWIN's hypothesis in a proper point of view, and to shew the impropriety of his classification; perhaps this may be done at a future time.



# BOOK III.

---

## ON THE PASSIONS, CONSIDERED AS CAUSES OF MENTAL DERANGEMENT, AND ON THEIR MODIFICATIONS, AND CORPOREAL EFFECTS.

---

Of all God's works which do this world adorne,  
There is no one more fair and excellent  
Than is man's body, bothe for poure and forme,  
Whiles it is kept in sober government ;  
But none than it more foule and indecent,  
Distempered thro' misrule and passions bace ;  
It grows a monster, and incontinent  
Doth lose its dignity and native grace.  
Behold who list both one and other in this place.

FAERY QUEEN, Book II. Canto ix. § i.

## CHAPTER I.

### ANALYSIS OF HUMAN ACTION, BEING AN INQUIRY INTO THE SOURCE OF THE PASSIONS.

*In what circumstances the object of the physician and physiologist, when inquiring into the nature of the passions, differs from that of the metaphysician and moralist. Natural classification of all the involuntary as well as voluntary actions of man. All these actions arise from pleasurable or painful feelings: Classification of the painful feelings which urge us to the first class of voluntary actions. Enumeration of the pleasurable feelings which produce the same effect. Enumeration of the painful and pleasurable feelings which impel us to the second and third classes of voluntary actions. On the origin of desire and aversion. Definition of desire, and of aversion. Secondary desires. What kind of desires and aversions constitute passions. Difference between animal desires and aversions, and passions. Upon what principles do*

*do ideas beget passions? Digression concerning mental pleasure and pain. General character of these affections. The pleasurable and painful feelings which arise from mental causes are corporeal feelings. They are felt at the præcordia. Why the heart is commonly considered as the agent of moral action. Classification of the ideas which create mental pleasure. Classification of those which cause mental pain. Origin of the motives of action. Difference between them and the involuntary physical effects of a passion. Emotions, what they are. Effects which the passions produce on the body. Effects which they produce on the mind.*

MAN is not a self-active being whose conduct depends intirely on impulses which originate within himself. He has, indeed, many pleasurable, as well as painful feelings, which impel him to commit various actions; and in respect to these he may be said to contain within himself the secret springs of his own conduct; yet these are often excited by external causes, and he is also under the influence of other external circumstances to which he  
either

either spontaneously, or else is forced to yield notwithstanding his efforts to the contrary.

That no passion can arise without previous desire or aversion, and that no desire or aversion can occur without a previous feeling of pleasure, or pain, are axioms the truth of which will be granted as soon as they are sufficiently reflected on.

As all human action may be said to spring at first from feelings of pleasure or pain, and as these depend on our organization, as well as the agency of many external circumstances, the plan which we must pursue in our endeavours to discover the source of the passions, is evidently pointed out. The more immediate objects of our present existence must be constantly held in view, and our internal structure and œconomy, by which the wants of animal life are to be obtained, must be fully understood, and all the sources of painful and pleasurable sensations well known before we can expect to make a successful progress in

such an obscure and intricate branch of scientific inquiry.

It is, perhaps, owing to the very extensive knowledge of physical, as well as moral facts, which is required in such an investigation, that so few satisfactory treatises have appeared on the origin of the passions, by those who have principally treated of them.

Moralists and metaphysicians have written copiously on the subject, but they have confined themselves solely to the views of moralists and metaphysicians, they have divided and subdivided it, and made inquiries concerning it, which are of no use whatever to a medical inquirer, except inasmuch as he himself is concerned in the morals of the community he lives in.

The passions are to be considered, in a medical point of view, as a part of our constitution, which is to be examined with the eye of a natural historian, and the spirit and impartiality of a philosopher. It is of no concern

cern in this work whether passions be esteemed natural or unnatural, or moral or immoral affections. They are mere phenomena, the natural causes of which are to be inquired into; they produce constant effects on our corporeal frame, and change the state of our health, sometimes occasioning dreadful distempers, sometimes freeing us from them; these facts are to be carefully observed, examined, and enumerated. They produce beneficial and injurious effects on the faculties of the mind, sometimes exalting them, sometimes occasioning temporary derangement, and permanent ruin: the progress to these different states also deserves serious consideration.

The following research, therefore, into this interesting part of the animal œconomy, is meant to be general, in regard to the various circumstances which conspire to throw any light on the origin of the passions; but it must, from the nature of the present undertaking, be principally confined to a physiological and medical point of view. Were I to enter into a discussion of the moral effects of the passions, or of some of the more abstract meta-

physical questions which are agitated concerning them, it would destroy the connection which they have with the preceding parts of this work.

Not only the involuntary, but also the voluntary actions which almost all animals have in common with each other, are directed to one or other of the three following objects; the preservation of their own existence; the propagation of the species; and the preservation of the young offspring.

The *involuntary actions* which support the existence, and preserve the life of individuals, are extremely numerous, and arise from the peculiar properties and powers of various organs; such as the action of the stomach, and intestines; the action of the lacteals, and lymphatics, or the absorbent system; the action of the heart and arteries; the action of the vessels which secrete the grosser materials of our frame, such as bony matter, muscular flesh, fat, cellular membrane, brain, nerves, membranes of various kinds, ligaments, &c. and also those which secrete fluids to be absorbed, or to be rejected, for instance, the saliva, pancreatic liquor,

liquor, bile, and urine; and to these may be added the action of the lungs, and the whole system of glands.

The involuntary actions which are necessary to the propagation of the species are the action of the spermatic vessels, the peculiar action in the testicles, by which semen is secreted, and the particular action of the ovaria, by which the female rudiment of the foetus is formed.

All the actions of the male parent which are conducive to the preservation of the young offspring, are voluntary ones, taking the expression in a physiological light; but in the female parent an involuntary action commences as soon as the child is born, on the continuance and healthy state of which, the life and well-being of the infant, in a great measure depends: I allude to the secretion of milk.

The greater number of the involuntary actions of man, as well as of other animals, is carried on without any consciousness of what is going forward. The various parts are endowed with a principle of action, called irritability,



irritability, which is independent of mind, and by which they are thrown into their natural actions as long as the natural stimuli are regularly applied to them.

Although we have not any consciousness of the involuntary actions themselves, while they continue in a state of health, yet as the stimuli which support them are all derived, directly or indirectly, from without us, and as these stimuli must be procured by voluntary exertions, so we are urged to obtain them by very powerful feelings. These feelings constitute the great fountain from which a vast number not only of our desires and aversions, but also our passions arise. They are of two kinds, being either pleasurable, or painful; and it is a curious circumstance in our œconomy, that we are generally urged not only by pleasure, but also by pain, to such actions as are necessary to the accomplishment of any of the three great ends already enumerated. Let us proceed to enumerate these feelings, which give birth to what may properly be called primary desires, and point out the passions which arise from them.

In doing this the reader must be satisfied with a mere detail, for it is impossible to enter into a complete history of them, without in-croaching too much on the general phyfiology of the human body.

The feelings which give rife to the defires which impel us to the performance of fuch actions as are neceffary for our own prefervation, are of two kinds : they are either painful, or pleafurable.

The painful ones, which are by far the moft powerful, are

1ft. The feeling of hunger,

2dly. The painful bodily anxiety which arifes when our refpiration is impeded, either by mechanical means, or by a privation of good air,

3dly. The uneasy fenfation of extreme heat or cold.

4thly. The uneasy fenfation arifing from the retention of various matters which ought to be expelled the fyftem.

5thly.

5thly. The pain of confinement, or want of exercise.

6thly. The pain of weariness and fatigue.

7thly. The pain of external injury, or internal disease.

By the first of these a man is impelled to all the actions of his life which have the supply of food for an object. These actions must necessarily be various, according to a great number of circumstances; for although all men have the same desire arising out of the same bodily feeling, yet the object is different in different countries, and the means of obtaining it are also various. The voluntary action, therefore, must be modified by climate, by the various articles of diet which that climate yields, by the person's living in a savage state, or in society, and by his being able to obtain it more easily in one way than another. Hence, the various contrivances and practices of hunting among the American, and African savages; the arts of fishing among the inhabitants of Groenland; the agricultural state of the mild Hindoos;

does ; the various professions, and means of livelihood of men in civilized society ; and the robberies and depredations of the wandering Arab.

The second kind of feeling necessarily excites man to select a situation in which he can have a free supply of that element which he is obliged to breathe.

It causes him to give certain dimensions, and forms, to his habitation, and forces him to remove many noxious bodies from its neighbourhood. The voluntary actions which spring from this desire must, like those which originate in the first, be greatly modified by local circumstances, such as the nature of the climate, the materials which it yields, &c.

The uneasy feeling which arises from extremes of heat and cold, gives birth to the necessary arts and manufactures which supply mankind with cloathing, and with shelter against the severities of the winter's cold, or the scorching heat of the sun.

The

The fourth kind of feeling excites desires, the voluntary actions of which are very much the same in all men, and certainly require no comment.

The fifth gives rise to desires which induce us to take a due quantity of exercise, and to strive against confinement.

The various arts and contrivances which render sleep and rest more comfortable and secure, arise from the sixth.

The seventh gives birth to the arts and actions of self-defence, and to those of avoiding many physical causes of injury to which we are constantly exposed. It is the parent of medicine and surgery.

The pleasurable stimuli by which man, as well as almost all animals, are excited to the same actions, are

1st. The pleasures which the various articles of food produce on the organs of taste.

2dly.

2dly. The pleasure of breathing a pure atmosphere.

3dly. The pleasurable feeling of the skin from moderate warmth.

4thly. The pleasure arising from the being relieved from matters which irritate when confined and pent up.

5thly. The pleasure arising from various exercises.

6thly. Relief from weariness and pain.

The painful corporeal feelings, by which man, in common with other animals, is impelled to the propagation of the species, arise from the fullness and distension of the spermatic vessels, especially those which form the epididymis. In the female sex it seems to arise from some action in the ovaria. The pleasurable feelings which act as additional motives for the voluntary actions which arise out of this desire, are the gratifications which are experienced by the union of the sexes.

It has been already observed, that man does not seem to be urged by any corporeal feelings to the preservation of the offspring. In women, however, there is a very painful one arising from the distension of the breasts, in the relieving themselves from which they experience much pleasure. It is on this account that the love which the mother has for the young offspring is, in general, much greater than that of the male parent.

It is surely needless to observe after what has been already said, that all the actions of the young animal spring from the same causes. A very slight examination of these must convince us of the truth of this assertion. "Omne  
 " animal, simul atque natum fit, voluptatem  
 " appetere, eaque gaudere ut summo bono :  
 " dolorem aspernari ut summum malum, et,  
 " quantum possit, a se repellere." EPICURUS,  
 ap. Ciceron. de finibus, lib. 1.

If one could suppose a society of men so situated in this habitable world, that these various feelings could be easily gratified, either  
 by

by the possession of what was pleasurable, or the removal of what was painful, there would be reason to conclude that human life would be uniformly serene and peaceful, and free from many passions which arise from the impediments which are placed in the way of our natural wants.

The law of this world, however, is, that man must procure his food by the sweat of his brow. Obstacles have been placed between him and the objects of his most natural desires, in order to urge him to the active employment of those faculties, on the perfection of which, our future happiness, most probably, depends. Many of these obstacles arise out of the natural construction of the globe itself, many others are owing to the artificial constitution of the society in which we live; and hence many new and powerful feelings which agitate the human frame.



ON THE  
ORIGIN AND NATURE OF DESIRE,  
AND AVERSION;

AND ON THE  
ORIGIN OF PASSION.

WHEN a person is deprived of food, of rest, of exercise, of a companion of the opposite sex, or of any thing which is necessary, either for his own preservation, or that of his young offspring, the painful, or uneasy sensation that accompanies such wants, brings into his mind, or to use the common expression, causes him to think of the objects by which such feelings are to be relieved. He then *desires* to possess them.

We often foresee a number of impediments which are placed in the way of our desires, and we are affected with a disagreeable feeling in consequence of this foresight; to this we give the name of *aversion*.

That there cannot be any desire or aversion without foresight, is an axiom which is laid down

down by many writers ; an axiom, the truth of which will become clearer the more closely we examine the passions apart from each other ; and which therefore will be elucidated in the following chapters of this book.

In every desire we foresee an agreeable something (the cause of some pleasurable sensation, or mental perception, or both), which by a constant and powerful effort of the mind we endeavour to realize.

In every species of aversion we foresee a disagreeable something (the cause of some painful sensation, or mental perception, or both), which, by an effort of mind, we endeavour to avert from us, or, in other words, we endeavour to realize an opposite sensation.

The effort of the mind employed in desire and aversion, of which every person is conscious, will be found, if narrowly examined, to be a strong effort of attention. By it, the idea of the thing desired is retained to the almost total exclusion of every other one, and by this means the objects of our desires and aversions  
often

often acquire an amazing degree of vividness and strength, considering them as mental stimuli.

The bodily effects of our desires and aversions are naturally produced by the elements of which they are composed. They arise in the first place from the object foreseen, and in the second place, from the exertion of attention employed. The corporeal effects which the object foreseen produces, are exactly similar in kind to what the real object would have produced on our frame; the only difference is that they are weaker in degree.

When our animal desires and aversions are opposed, or not gratified, new desires and aversions arise, which are attended with painful and pleasurable feelings, that are totally distinct from those which gave birth to the primary desire or aversion. The feelings which accompany these are felt about the præcordia, and are, at times, of such a powerful nature as often to destroy all the operations of cool reason, and to throw the human frame into the most violent agitation and disorder. These  
new

new desires and aversions thus characterized by pleasurable or powerful feelings at the præcordia are called passions.

Animal desires and aversions are distinguished from passions, in the first place, by a difference in the seat of the corporeal feelings. The feelings which accompany the former are only felt in those parts of the body where the uneasy sensation that gives rise to the desire exists; the desire of food is attended with an uneasy sensation in the stomach, called hunger; the desire of drink is attended with an uneasy sensation in the mouth and throat, called thirst; the desire of repose, with an universal pain, or uneasiness throughout the whole frame, called weariness; but, however violent these desires may be, they never produce the peculiar feelings of any passion. They may, indeed, give birth to passion, in an indirect manner, and then the peculiar feelings at the præcordia are felt; if, for instance, a person is long deprived of food or drink, the circumstance may excite the passion called fear: or if he is deprived of it by the violence of another

Vol. II. I person,

person, it may excite the passion of anger, &c.; in all which cases it is evident that the mere animal desire operates in an indirect manner.

In the next place, all the desires and aversions which are called passions are distinguished from mere animal desires by the clearness of the object foreseen, and by the object foreseen being both the one which gave rise to the passion, and also the one against which, or towards which, all the voluntary actions that arise in the passion are directed. A person who excites in us the passions of anger, fear, love, friendship, or charity, &c. is at once the cause and the object of our anger, fear, love, friendship, or charity; but the exciting cause of animal desire is always an obscure feeling, and quite distinct from the object against which, or towards which our will is directed.

Before we proceed any further, let it be remarked that the word *emotion* is often used, not only in conversation, but also in philosophical

phical works, as an equivalent expression for passion. At other times it is intended to denote the disorder which prevails in the mind, and at others, the corporeal feelings about the præcordia, which are also often called feelings of the heart.

It is well known that the same passions may arise from a mental cause, as well as a corporeal one. Thus grief and anger may arise not only from personal pain, but from ideal pain. Many passions, indeed, arise solely from mental causes, as piety, charity, benevolence, &c.

Now a curious question occurs in consequence of this observation: Upon what principle do ideas beget passions? There is no intrinsic quality in the word *honor*, which ought materially to affect any one; yet we see that it shall rouse a man to such a state of passion as to make him forgetful of one of the most powerful animal instincts, that of self-preservation; and in the indulging of which passion he often foresees certain death.

If passions arise from abstract ideas, as well as from the feelings which accompany animal desires and aversions, there must be a common principle on which they operate. It is worth while to investigate this matter before we speak of the general effects of the passions.

---

ON

## MENTAL PLEASURE AND PAIN,

AS ANOTHER GENERAL SOURCE OF PASSION.

IT has been established as an incontrovertible truth, that a great many of our pleasures and pains are by no means to be considered as the property of mind. It has been proved that they belong to our corporeal frame; that they take their origin in our nerves, and are felt in them alone; and it has been added, that the nervous feeling ought, in philosophical language, to be accurately distinguished from the consciousness we have of such an affection.

Corporeal

Corporeal pleasure, and pain, always originate from physical causes, acting immediately on the nerves ; such, for instance, as the pleasure of gentle friction, moderate warmth, a certain degree of light, variety, and concordance of sound, and certain impressions on the organs of taste, and smell ; blows, cuts, burns, lacerations, and the pain from the corrosion of chemical agents, from the sharp and acrid fumes of bad foeces, &c. But the pleasures and pains which are to be treated of at present, may be properly said to be mental, inasmuch as they do not arise from what are commonly considered as physical causes, but from moral or intellectual ones ; I mean ideas. They are either ideas which are forced upon us by external objects, or by a train of associated ideas, or they are the immediate production of our own fancy, or of our taste and learning ; and at other times, they are ideas which are the offspring of the fancy, taste, and learning of others.

Those ideas are pleasurable which the mind loves, as it were, to dwell on, and which it

is



is anxious to retain for a certain length of time.

Those ideas are painful which occasion the sentiments of disgust, aversion, or distress of any kind. The prospect of attaining one's wishes; the consideration of the advantages which we expect to derive from them, after they are attained; the train of ideas which succeed each other in a lover's mind, on receiving a kind letter from his mistress; the reflections which succeed acts of benevolence; every gay inspiration of fancy, and every pleasant sport of imagination, are circumstances which the mind dwells on with delight; which it quits with regret, and which, if suddenly deprived of, it strives to recal. The prospect of some impending evil, the disappointment of a long-expected wish, the reflection arising from acts of ingratitude shewn towards us; the consciousness of our inability to relieve the distresses of a dear friend, or a person we tenderly love, are sentiments which occasion the feelings called distress, and from which we are glad to be relieved.

So far are these pleasures and pains mental ; but no farther ; for the pleasurable and painful feelings which arise from mental causes, are not felt in the mind but in the body ; they undulate about the heart, and breast, producing great and remarkable physical changes there ; the influence of which is often extended throughout the vascular and nervous parts of our whole frame.

In a moral sense, nothing can be purer, or less sensual than the approbation of a guiltless conscience, the endearments of friendship, the pleasures arising from the recital of all kind, generous, noble, and benevolent actions ; and the praise of honest men ; but in a philosophical light, objects must be viewed in a different manner from what they are in a moral one.

The internal gratifications, and uneasinesses, which we call mental, are all felt about the præcordia ; and strictly speaking, therefore, are sensual. It would appear that the sensorial impressions, which all ideas belonging to these causes produce, are communicated by a necessary law of our œconomy to these parts, affecting

affecting particularly the heart, diaphragm, and organs of respiration. It is there that the pleasure or pain is experienced ; nothing can be a more convincing proof of this than the common expressions and actions of mankind when under the influence of one or other of these feelings. *Our heart, we say, is relieved from a load ; it is light ; it jumps for joy ; it is oppressed ; it is full ; it is ready to break ; it is touched with sorrow ;* and when a good actor means to convey to an audience the feelings which such emotions produce, it is not to his head, the seat of mind, that he applies his hands, but to his chest, which, if he be under the influence of internal pleasure, he compresses with both his hands, and with an expression of satisfaction ; or, on the contrary, if he be distressed, he beats it as if for the anguish it makes him suffer.

As the heart is supposed by the generality of mankind to be seated where we experience the feelings of mental pleasure and pain ; and as these pleasures and pains enter more or less into the composition of all our passions, we

see the reason of other remarkable actions, and modes of expression of men. That organ, the heart, which ought rather to be considered as a great sufferer in our passions, is commonly regarded as the source of moral action. Such a man is said to have a good or bad heart; and when certain savages mean to satiate their revenge to the utmost, they are not content with killing their adversary, but tear out the heart, as the great object of their hatred, and gnaw it, or drink its blood; and if we were to judge, from the nature of some English oaths, a barbarian of this country would do the same thing, did not his personal fears prevent him.

The source of all these deeds, and expressions, therefore, evidently lies in the corporeal sensation, communicated to the præcordia, and neighbouring parts, from the brain, in consequence of the sensorial impressions made on it by the ideas; a circumstance curious in itself, and which I hope justifies the digression which has been made.

The ideas that are fitted to produce mental satisfaction, and uneasiness, are so numerous, and of such variety, that it is impossible to ascertain their number; and indeed there is an obstacle independently of this, which renders such an attempt impracticable, I mean, that the same set of ideas seldom affect all mankind alike; for the dispositions of men in this respect are so various, that some are hardly roused from a state of indifference, when others experience considerable pleasure, or uneasiness.

The cause of this variety in the different feelings which men have for intellectual pleasures, and pains, is a very curious subject of inquiry, and one well worth the attention of philosophers, since its solution evidently leads to a discovery of the causes of that astonishing difference in the tastes, sympathies, and certain pursuits which we observe among them.

In some people it evidently arises from the original constitution of their nerves, including the occult cause of this energy, whatever that may be.

A very

A very striking circumstance which relates to this inquiry is, that people who are endowed with much physical, or nervous sensibility, are, for the most part also, more powerfully affected by mental pleasures and pains, than the phlegmatic race, whose nerves are only made to feel by means of strong impressions.

Whether this difference which we observe in the corporeal sensibility of men, arises from a difference in the structure of the nerves, or in the secretion of the nervous fluid, is a question which cannot be decided for want of absolute proof, as has already been taken notice of in the chapter on Sensation.

I proceed to the consideration of other questions intimately connected with the present subject, but which from their very abstract nature, and from bordering too much on speculative philosophy, must be dismissed in an unfinished state.

Upon taking a general and comprehensive view of all the ideas which create mental pleasure,

ture, it appears that they all belong to the two following classes :

1st. Such ideas as represent the pleasures of the senses.

2dly. Such objects and thoughts as are actually conducive to our well-being and happiness, or those which are esteemed such by us.

Mental pain on the other hand arises from :

1st. Such ideas as represent the pains of the body.

2dly. Such objects and thoughts as are actually destructive of our peace and happiness, or such as are considered in this light by us.

Many of these causes awaken desire, or aversion, in a direct manner, that is by immediately presenting to our minds the objects of our desire or aversion ; whereas, others do so in an indirect manner, that is, through the medium

medium of some of the mental faculties. Hence it follows that we have pleasures and pains arising from acts of memory, of imagination, and of judgment. These will be examined afterwards, in the chapters on Joy and Grief.

Having now traced the origin of human passions, to a few general principles, and having pointed out the distinction between them and animal desire and aversion, we proceed to take a view of their effects on the mind and body, and to shew which of them tends to produce mental disorder, and how they do this.

---

## GENERAL EFFECTS

OF THE

## PASSIONS.

THE emotions of our mind which arise from the desire, or aversion peculiar to each passion, generally terminate in a species of judgment,



judgment, which forms the *motive* of the voluntary actions that take place, and which actions constitute the moral effects of the passion. The emotions of the mind, on the other hand, or thoughts which arise in our mind from the immediate perception, or foresight of the object which causes the passion, produce sensorial impressions which are sent, independently of volition, to various parts of our frame, and throw them into more or less disorder. These may be said to be the animal effects of the passion. A single instance is sufficient to elucidate this position.

Consider the actions of a person surprized by some object of terror. Suppose, for instance, a traveller coming suddenly upon, and alarming an hungry and ferocious animal, such as a tyger, or lion. The voluntary actions of this person would be various, according to circumstances, that is, they would be varied by his local situation, by the danger he foresees, and by his avoiding or preventing it. If he were sufficiently armed he would probably put himself in  
a posture

a posture of defence ; if not, he would use stratagem, or attempt to fly.

These determinations of his are so many judgments, in which the crowd of thoughts, which at first rush into his mind, terminate. They may or may not take place, according to circumstances ; but whether they do or not, the animal, or involuntary effects, arising from the sudden perception of the objects of the passion, are constantly the same, provided the person considers the object as an object of terror. His heart is thrown into greater and more violent action than usual ; but the arterial system, so far from corresponding with it in a general sense, is either rendered torpid at its extremities, or else is affected with a spasm. A sudden paleness spreads itself over his countenance, his lips lose the coral tint, and the whole body of the man seems to shrink into a smaller compass ; a tremor agitates his whole frame, and he feels as if he had suffered a great diminution of strength. Such are a few of the effects of sudden terror, and they are constant and involuntary,

voluntary, and the only variety they suffer is in degree, or duration. The causes why they vary in force and duration shall be inquired into afterwards.

Now as the effects of any particular passion on the organs of involuntary action differ in degree only, it is evident that their exciting cause also differs only in this respect; and as the effects of the passion on the will are different, not only in different people, but in the same person according as he is placed in different circumstances, it appears evident that passion is a very complicated affection. The corporeal effects of passion arise from the sensorial impressions of the object foreseen, from the pain or pleasure which excite volition, from the straining of attention, and also from the voluntary acts.

Many of the pleasurable or painful sensorial impressions are sent to the præcordia. These, in common language, are generally called emotions. When they are powerful, they withdraw the attention of the person from  
all

all objects except those which are more immediately connected with the passion, and in consequence of doing so, destroy, in a remarkable degree, the operations of reason. For what does the expression, to be actuated by reason, mean, as applied to our actions? Is it not the possessing the power of attention in such a degree as to be able to compare, with each other, the ultimate effects which our actions may produce, not only on ourselves but also on that of every other person, and every thing with which they are in any way related, and to regulate our conduct accordingly. He who can take the most comprehensive view of these various objects of thoughts, and can regulate his actions accordingly, will always appear to be the most reasonable, as well as the wisest man. But this operation of human understanding requires, not only, an attentive examination of each idea, but also an easy transition of attention from one subject of thought to another; events totally incompatible with passion, in which one powerful idea is constantly present, and in which our attention is also fixed by our corporeal feelings.

When that degree of attention which is necessary for every act of judgment, is so much weakened as not to be capable of restraining the flow of ideas, and directing them in a certain channel, imagination then takes the lead, and a croud of images, connected with the prevailing thoughts, offer themselves spontaneously, as it were, to the mind. In this way our desires and aversions are greatly heightened, and our hopes and fears, anger, jealousy, love, hatred, and envy, considerably augmented. Now, considering all ideas as stimuli, it may easily be conceived how much volition must be excited by motives, the force of which is so much increased beyond the common standard. Doubtless, these are much modified by education, habit, age, sex, temperament, and climate. Hence it follows, that except we are perfectly acquainted with the mental character of a person, it is impossible to predict with any degree of certainty, how he will act when under the influence of any particular passion; and even then it is hardly possible to do so, as he may not foresee all the accidental circumstances which have an influence

influence on his actions at the time he is under the passion. To illustrate these observations, let us dwell a little longer on the case already mentioned.

As soon as the sight of the dangerous animal meets the eyes of the person who has roused him, his first actions, whoever he be, are generally those which accompany the instinctive impulse of self-preservation; he shrinks back, and his hands are brought more or less forward. This action is performed so quickly that it seems to be totally independent of volition, and by many, indeed, it is commonly called an involuntary act. It is called so because we are not conscious of the motive which impells us to act; and we are not conscious of the motive, because no reflection, or comparison has preceded it. It is in general, however, soon checked by a new chain of ideas, and by many acts of judgment. I say in general; for it happens, now and then, when the whole play of the mental faculties, as it were, are destroyed by the impression of the dreadful object, and no possibility of es-

cape appears, that volition being then without a stimulus, a person drops down on the earth as if suddenly bereft of all his animal powers. But when reflection takes place, numberless ideas crowd into the mind, all of which are connected, however, with the desire of self-preservation. He menaces, or caresses, he flies, or stands still, he attacks, or uses stratagem, according to the quick judgments he forms of his situation, and of the nature of the animal, and of his means of defence or escape. Now, it is probable, that no two men would form exactly the same judgment in similar situations; for the notions which have been instilled into our minds by education, by sex also, and by temperament; by our habits, and nervous idiosyncrasy, will always modify them.

It would form a most interesting part of the history of human actions, if a very comprehensive view were taken of those subjects, and if they were philosophically examined as so many causes which modify the voluntary acts

of

of the passions ; for in this case some general principles might be detected, which would enable us to foretel, with certainty, how any man would act when under the influence of any passion, and when under such circumstances and situation as should be known. In this work inquiry is inadmissible, since the moral effects of the passions throw no light on the diseases of the mind.

One of the most remarkable, among the multitude of general effects, which the passions produce on the corporeal part of our system, is a change of temperature. All those which arise from strong desire, increase the heat of the body; and those which are the offspring of aversion, occasion sudden chills, and often a sensation of intense cold. These effects evince great changes in the sanguiferous system ; for whenever heat is evolved in greater or lesser quantity than usual, it is generally found to correspond with an increased or diminished circulation.

That



That the sanguiferous system does sustain great and sudden changes from the influence of the passions, is a fact which common observation is sufficient to prove. In all those which are the offspring of desire, it is accelerated; and in all those which spring from aversion it is slower. In sudden joy, in eager hope, in the expectations of love, in the endearments of friendship, the pulse beats quick, the face glows, and the eyes glisten: in grief and sorrow, extreme anger, hatred, jealousy, and envy, the blood stagnates about the heart, a chilling cold spreads itself over the whole surface of the body, the blood forsakes the cheeks, and a tremor ensues.

It is by no means easy to assign even a plausible reason for the production of these phenomena. It has been proved (see chapter on the Mind) that a difference in the physical properties of bodies always implies a difference in the mixture of the elementary parts of which they are composed. If a body gradually exhibits a series of phenomena which are not natural to it, it is a presumptive proof either  
that

that the mechanical attraction, or the chemical composition of the body, is undergoing some physical change. It has been proved that all physical and chemical stimuli derange the organization of parts to which they are applied, (see chapter on Irritability,) and it is probable that the motion of irritable bodies, which arise from the action of physical stimuli, is nothing else than the re-arrangement of the elementary particles. Now, if the heat of the body depends for its steadiness of temperature on a certain permanency in the proportion and number of the elements, of which the blood is composed, as well as on the composition of the air which we breathe, as every experiment which has yet been made on the subject tends to prove, it follows, that whenever such physical causes are applied, as change either in a direct or indirect manner, the composition of the blood, the temperature of the body will undergo corresponding changes. The action which the ideas produce on the nervous principle is a physical effect; the sensorial impressions which are excited by them are to be considered as much a mechanical derangement

rangement of the fine particles of which it is composed, as if the impressions had arisen from a solid body applied to some of the nerves of our skin ; but as all nervous impressions act on the heart and arteries, and other irritable parts of our frame, as so many stimuli, and as it has been proved that all stimuli irritate, either by actually deranging for a time the organization of the irritable part to which they are applied, and as every change in the action of blood-vessels, considered as irritable parts, produces a corresponding change in the state of the fluids, we therefore see the concatenated series of causes and effects which are interposed between the action of ideas, and the flushes of heat and cold, which many of them occasion. The particular ideas which give birth to such phenomena have been defined in the dissertation on corporeal and on mental pleasure and pain.

Although all the nerves of the human body are similar in structure, as far as relates to the coarser ingredients of which they are composed, yet, as we find from experience that they  
do

do not all convey similar impressions; this gives rise to the suspicion that the fine matter which is secreted in them, and which surrounds the medullary particles to which we have given the name of sentient principle, is a little different in each nerve. Now this supposition explains, in a certain degree, why some sensorial impressions, no matter whether the continuation of external nervous ones, or those which immediately arise from a chain of associated ideas, act on one class of nerves rather than another; and this accordingly explains why every passion affects one part of our corporeal frame more than another; for as some ideas are to be conceived as being stimuli which are better adapted to act on one set of nerves rather than another, their ultimate corporeal effects must necessarily be determined more to those irritable organs of our body which are supplied by such nerves rather than to others. Fear is apt to occasion a diarrhœa and incontinence of urine; anger affects the functions of the liver; grief disorders the stomach, and affects the lachrymal gland; sudden terror, when without hope, produces an almost

almost complete palsy ; and hope itself, when the attainment of the object is near, affects the organs of respiration, and causes a quick and powerful distribution of blood throughout the whole body.

It has been remarked, that all desires and aversions, and consequently all our passions, are attended with pleasurable or painful feelings at the præcordia. It remains to be observed, that many of these have a very remarkable reflex action on the mind.

They are to be considered independently of their origin, as so many cases of corporeal pleasure or pain, the impressions of which are transmitted to the brain.

The corporeal pleasure or pain which accompanies our passions, always tend to disengage attention from objects of abstract thought, and they consequently tend to destroy the restraint which the mind must be kept in while exercising the operation of judgment. Hence the will yields to other desires and aversions which arise from the corporeal sensations, and is  
often

often thrown into the most violent and ungovernable excitement. The voluntary actions of a person, therefore, who is under the influence of a strong passion, is, in this respect, like those of a maniac.

When the sensorial impressions, which arise from the primary desire, or aversion, that give birth to the passion, and those which arise from the corporeal pleasure or pain felt at the præcordia are violent, they act on the brain in the same manner as the physical stimuli mentioned in the chapter on Delirium; and they consequently induce this state of mind, and become common exciting causes of insanity. If there be a strong hereditary predisposition, the delirium often continues for a considerable length of time; if there be no predisposition, it generally subsides very soon; but if the exciting passion be often renewed, a predisposition seems now and then to be accidentally formed, and thus, in those who have no original or hereditary taint, downright insanity may arise from violent passions; a fact which now remains to be proved by particular instances.

## CHAPTER II.

ON JOY, ITS MODIFICATIONS, AND EFFECTS;  
BEING A CONTINUATION OF THE SUBJECT  
OF MENTAL PLEASURE.

*Mental pleasures differ in intensity, and in their causes. Expressions by which we distinguish the various degrees of mental pleasure. Expressions by which we denote a variety in their causes. The sources from which the ideas that give birth to the various kinds of joy, enumerated, and examined. Upon what principle works of science, and abstract truth give pleasure. Division of the pleasurable passions into two classes: their character. The phenomena of laughing and leaping for joy accounted for. The various causes of laughter classed, and the general principles on which they produce their effects explained. The physical effects of joyful ideas. How it acts on the system at large. The nature of the various subordinate changes which it produces described, and accounted for. The effects*

*of.*

*of joy on the mind. Its effects on attention, memory, imagination, and judgment. In what way various pleasurable ideas beget insanity. Of the effects of vanity and pride. The corporeal effects of strong and sudden joy. Upon what principle it produces epilepsy, fainting, and death itself.*

THE various mental pleasures which man experiences, differ more from each other, in their causes, and their intensity, than in their general influence on the mind or body. We employ a few terms to denote the different degrees of mental enjoyment which we experience, and we also distinguish, by means of different appellations, the different kinds of joy that arise from different objects or causes; and hence we are apt to conclude, that there are a variety of pleasurable passions. The words *inward satisfaction, delight, joy, ecstasy of pleasure, and supreme bliss*, are the chief expressions which we employ to denote the different degrees of mental pleasure. The first signifies a much less degree of pleasure than



than the second, and the second not so much as the third; and the third not so much as the fourth. A person is said to be transported with joy, but not with satisfaction. Extreme delight produces emotions superior to either.

An ecstasy of pleasure signifies a sudden and powerful emotion, in which both mind and body seem to partake of the highest degree of enjoyment. If any higher degree of pleasure than this can be imagined, it may well deserve the name of *supreme bliss*.

The objects which excite joyful emotions are various; and according to the variety of the objects, they produce distinct desires, and consequently distinct phenomena in the moral world. On this account moralists have considered such modifications of joy as distinct passions; but in this work there is no necessity for speaking of the moral qualities of these affections; and as the influence which the greatest number of them have on the mind and body is very similar, considered in a medical sense, I shall treat of them in the aggregate.

There

There is one, indeed, which, independently of its general effects, by which it is allied to the class of mental joys, has also effects peculiar to itself. These entitle it to a particular consideration. The passion alluded to is one to which we all willingly submit, and are fond of cherishing; I mean love.

Joy, in its strict sense, is a term applied to denote a pleasurable feeling, or satisfaction, arising from some present event.

When joy arises in consequence of past events or actions, it is called *content*, or *self-satisfaction*. When it arises from the prospect of some future good, it is called *hope*. The pleasure or joy we take in the welfare and happiness of a person to whom we lie under obligations, and the consequent desire of promoting his welfare and happiness, is called *gratitude*. The pleasurable or joyful feelings which arise in our breasts from the consciousness of our being willing to assist the unfortunate, is called *compassion*. The sympathetic pain which  
arises

arises from the distress and sufferings of the objects of our compassion, might probably justify a person classing compassion with mental pain, or uneasiness, or at least considering it as a mixt passion. The pleasure we feel from the idea we entertain of a person's superior qualities, is called *admiration*, and *regard*; that which we experience on account of his amiable qualities, *esteem*. The mixture of the sentiments of esteem, regard, and admiration, form the basis of friendship, and what is called platonic love.

As the definitions which have been given of some of these terms, may not appear satisfactory to many on account of their conciseness, it may be proper to dwell a little longer on them.

Content, and self-satisfaction, are species of joy, both of which arise from past events; and these events are almost always the removal of mental or corporeal pain. Content may be said to reign in the human breast when the  
pain

pain which has attended some ungratified desire, or desires, is removed. It has no reference to the cause of the removal: but *self-satisfaction* denotes its having been procured by ourselves. When painful doubts which hung over us for some time, and which concerned our fortune, or our personal fate, are once removed, we experience the agreeable feelings of content. When a man of a generous turn of mind has done another an injury, he is not content until he has made due reparation for it; after he has done that, a secret pleasure pervades his whole frame, to which we give the name of self-satisfaction.

That hope consists in an expected pleasure, arising from the prospect of some future good, scarcely stands in need of illustration. The criminal who is almost driven to despair by the discovery of his crimes, and the verdict of a jury, feels a lively, although a limited pleasure, if through the wisdom or lenity of the judge he is recommended to mercy; he hopes the recommendation will be attended to; and although he suffers a se-

cret dread from the uncertainty of his fate, it is not without a mixture of pleasure, since there is a chance that he may be saved from the most fearful event to which human nature is exposed. If he is respited, the prospect brightens, and a greater degree of pleasure fills his bosom.

It is said by those who have drawn hasty conclusions from a few facts ill observed, that gratitude springs from selfishness. What is that kind of selfishness which makes a man who has been shipwrecked, preserve, with a kind of sacred care, the raft on which he saved his life? As self-preservation is the most powerful instinct which animates his frame, and as every thing which contributes to it, gives him pleasure, the sight of the piece of wood recalls to his mind both the danger he was in, and the means of his escape. It occasions pleasure upon the principle of the association of ideas: as an object of pleasure he preserves it, and so far it is connected with self; but there is surely a great difference between this feeling and selfishness, as commonly  
and

and properly understood, which, were it the sole source of his actions, would reduce him below the level of a beast. The pleasure a person receives on seeing his benefactor, does not arise from the expectation of future services he may render him, but the good he has already received from him. It may not be in his power to assist him any further; still he loves him; he rejoices when he hears of his success or happiness; he is grieved at the misfortunes which happen to him; he hates his enemies; he loves his friends. A sense of duty ought, indeed, to teach him not to hate any man's enemies, or love any man's friends, except they really merit such sentiments; gratitude, therefore, is not the offspring of reflection, or reason; but selfishness acts constantly on the same plan, and demands much reflection and thought: it would prompt a man to be ungrateful rather than grateful, because he could oftener promote his interest by paying a cautious court to the enemies of his benefactor or friend, than by cherishing a dislike against them.

That compassion, admiration, regard, and esteem, are pleasures which arise from the sources to which they have been referred, requires no explanation, but the assertion will be illustrated by the investigation of other causes of mental pleasure.

In generalizing the principles on which all ideas, which create the feelings of mental pleasure, act, it may be recollected, that they were said to be two in number. 1st. Such ideas as represented the pleasures of the senses; or, 2dly. Such ideas and thoughts as contributed to, or were supposed to contribute to, our welfare and happiness. Now these ideas may spring from various sources; they may be yielded by external objects; they may be recalled; they may be created by an effort of imagination, or by judgment; and hence we find many authors, especially poets, describing the pleasures of memory, imagination, and judgment. Memory is a source of joy when it recalls the varied scenery of our early years; such as the societies and places in which our happiest moments were spent; the sports in  
which

which we excelled ; and many innocent faults and follies which we committed. We recollect with pleasure, circumstances which formerly excited in our breast emotions of friendship, love, esteem, benevolence, and all the kind and smiling passions.

Most of the pleasures we derive from perusing works of taste, learning, and fancy, will also be found to resolve themselves into one or other of the two sources mentioned. HOMER'S description of the girdle of Venus, and of the Elysian fields ; MILTON'S description of Eve ; SPENSER'S description of the residence of Acrasy, " where pleasure dwells in " sensual delights," are all gay pictures, in which the chief objects that gratify the senses are brought into the mind, and the sensorial impressions of which pervade our frame in the same manner as the impressions of the objects themselves, had they been real, would have done ; the only difference being in degree.

There is a kind of mental pleasure which, if only slightly examined, might be supposed to



to depend on a distinct kind of principle from that which gives birth to joy; I mean that which men of science derive from the perusal of works of pure reason, or of works of science when they are well executed. An algebraist, a mathematician, a natural philosopher, all feel a secret pleasure in the perusal of works which either throw new light on the subject of their study, or which give a perspicuous, full, and true account of the present state of it. Can such pleasures be said to belong either to the gratifications of sense, or of passion?

The most abstract of all subjects, the unadorned offspring of cool reason, if well treated, will afford pleasure to a person who is sufficiently acquainted with the science to which it belongs. Of what kind is this pleasure? I answer in few words, it is of a mixed kind: agreeable, pure, and lasting. It consists, on the one hand, of sentiments which arise from the sense of a superior degree of perfection of mind in another, to what we are accustomed to find in mankind; a species of  
joy

joy to which we give the names of regard, admiration, and esteem. And, independently of these moral affections, it yields us real pleasure, inasmuch as it tends to satisfy one or more of the artificial wants which have arisen from our education, or pursuits in life; and for similar analogical reasons, the uneasiness we feel on reading an ill-written work, or in perusing some modern productions, in which ignorance and presumption are more evident than taste or learning, may all be referred to the class of mental pains..

Such are the terms by which we express the more remarkable varieties of the sources of mental pleasure; but surely it need not be remarked, that our pleasurable as well as painful feelings, are too numerous, and too variously modified, to be described by words. They are, at times, the result of the peculiar or constitutional susceptibility of feeling of our nerves; a susceptibility constantly changing by age, by education, by diet, climate, exercise, health, or disease; at other times they are the result of certain accidental situations in society,

society, occasioned by various relationships, connections, and unexpected occurrences of life.

All the pleasurable passions may be usefully divided by the physiologist into two classes, viz. the tranquil, or serene ones; and the lively or exhilarating ones; admiration, esteem, regard, friendship, content, and compassion, are calm and serene; lively hope, mirth, gaiety, and the many nameless mental pleasures, the quickness and violence of whose impulse make us laugh, leap, and sing, are lively and exhilarating.

The phenomena of laughing, and leaping for joy, only accompany that kind which we call mirth, and which, in a moral sense, may said to be the lowest kind of joy.

No great or lasting pleasure ever creates laughter; a fine picture, or statue, the agreeable scenery of nature, the grandeur of the Alps, and Appenines; the pleasures of esteem, regard, friendship, and content, never cause us to laugh; a placid smile, indeed, is often produced

produced by these objects, but this is totally distinct from the convulsion of laughter.

This phenomenon almost always takes its origin from flight, transitory, and sudden occasions.

It appears to me, that the ideas which excite it, almost always owe their effect, on the one hand, to the suddenness and violence of their physical impulse on the brain, by which the internal nervous impressions are sent with force to the diaphragm, and other organs of respiration : and on the other hand, to something peculiar in the impressions themselves, corresponding with the mental perceptions which excite them. All moral causes which make us laugh, occasion a sudden transition from one series of ideas, to others which are not only dissimilar, but contradictory to the former. This kind of contradiction is either, 1st. A contradiction between words and their more obvious meanings, or, 2dly. A contradiction between the sentiment which the words convey, and certain peculiar modes of thinking.

3dly. It

3dly. It consists in actions which are contradictory, inasmuch as they are apt to occasion two very opposite emotions at one and the same moment of time. Instances of the first kind are frequently met with in puns, especially bad ones, or *jeux de mots*, lively repartees, anecdotes, and the history of certain equivocal toasts, that go round with the glass. Of the second kind are the adventures of Don Quixote, the relations of a Baron Munchausen; certain satyrical caricatures, and all extravagant but harmless exaggerations of truth. To the third class belong a vast variety of objects, such as the tricks and gestures of stage-fools, and clowns, in pantomimic entertainments, whose faces and gestures display the most sudden transitions from seriousness to a broad grin; from crying to laughter, from awkward-obsequiousness and ceremony, to excesses of familiarity, and disrespect; from terror and apprehension, to foolish intimacy and security. There are a number of other causes of laughter which are apparently of a very different nature, and, doubtless, of a singular kind, since, when they are considered abstractedly, they

they ought to produce a very different moral effect; but the suddenness with which the contradictory parts of these causes strike us, produce a degree of irritation which is not to be withstood. The misfortunes of others, even those which are often attended with serious consequences, are what are alluded to. We are all inclined to laugh when a person from inattention knocks his head against a post, or wall, or tumbles down awkwardly; what surprizes us much more is, that many (I am almost tempted to say most people) now and then have been inclined to laugh when a person has first begun to relate some misfortune which happened, either to himself or to another. Nay, a more unaccountable circumstance of this kind is, that many people, when they have to tell us of the death of another person, feel themselves often inclined to laugh at the moment when they first begin to speak of it. It is by no means easy to discover the true explanation of this circumstance, for it cannot be conceived to be owing to a want of sensibility, since it often happens to those possessed of the most humane and feeling hearts. It  
appears

appears to me to be more owing to the contradiction which exists between the ideas present in the narrator's mind, and those which the face of the person, to whom he is about to relate the circumstance, awaken in him; or it may arise from the narrator's mind having been occupied the moment before with other thoughts of a very opposite nature; for it never happens to any one who has been thinking seriously on the event for some time before, and who is prepared to relate it. The reason why most people are inclined to laugh when a person first begins to give some melancholy account of himself, generally arises from the serious countenance, and grimace which he assumes on the occasion, and which, for the most part, are in complete contradiction with our own feelings at the time; but as all serious impressions, when they are transmitted to muscular parts, are to be considered as physical stimuli to them; and as a quick repetition of stimuli produces a quick repetition of action, and unequal stimuli produce unequal action, hence the laughter must be excited, and necessarily consists in short, violent, and rapid contractions

tractions of the diaphragm, interrupting the natural expiration, and preventing, for a considerable time, the taking in a fresh quantity of air, or of breath, to use the common expression.

It is evident, from what has been said, that laughter is, for the most part, an affection of the body, arising from certain thoughts which occur without the intervention of the will; that is, the thoughts which produce laughter do not necessarily excite volition; a person, indeed, may laugh voluntarily, inasmuch as he can voluntarily direct the impulses of this principle to the diaphragm and abdominal muscles: but as to leaping, dancing, and singing for joy, these, always, are to be considered as voluntary acts, although, indeed, we are not always conscious that they are so; for the suddenness and force of the impressions which excite them is so great, that no deliberation takes place.

The physical effect (sensorial impressions), which all joyful ideas produce on the brain, seems, then, to be that of a direct stimulus, not only to the whole of the nervous system, but

2 also



also to the sanguiferous one. Great joy often causes the heart to beat with such force and velocity, that a violent palpitation ensues, which may be easily felt by applying the hand to the breast of the person who is under the influence of the gay emotion.

Although such effects are not observed in weaker kinds of joy, yet the action of the heart is generally increased by it, from whatever cause it proceeds, as may be discovered from the increase of quickness in the pulse, and from the increased lustre of the eyes.

The heat of the body, and the various secretions and excretions, are known to correspond, in general, with the action of the arterial system, and hence we can easily conceive the truth of what Dr. ROBINSON \* asserts, when he tells us that, from experiments made by him, both the heat of the body, and perspiration, are considerably increased by joyful emotions.

\* ROBINSON on Food.

The action of the heart and arteries being increased, more blood than usual is sent into the muscles, in common with all the other parts of our frame; and hence the feeling of increased vigour and activity which is experienced by people who are animated by joy. A greater quantity of blood is also sent to the head, the face glows, the eyes sparkle, the crystal tear starts forward between the eyelashes, and a flood of tears often follows. Whether this uncommon flow of tears be owing to an increase of secretion, in consequence of a peculiar determination of blood to the lachrymal gland, or whether it arises from the mere compression of the muscles of the eye on that body, or if both circumstances conspire to its production, I do not pretend to decide.

The increased action of the heart and arterial system necessarily affects the organs of respiration. A person under the influence of joy, therefore, breathes fuller and quicker than usual, and the breast is said to heave with pleasure.

Although

Although the sensorial impressions of joy seem to be principally determined to the heart and sanguiferous system, yet its influence is extended to many other viscera of our frame. Moderate and continued joy, mirth, and gaiety, all increase the healthy action of the stomach and intestines, and seem to augment the secretion of bile, pancreatic juice, and the activity of the absorbent vessels.

In fact, whatever increases in a moderate degree the action of the heart and arteries, must necessarily produce tonic effects on every viscus, and on the whole of our frame. Every practitioner in physic must have repeatedly observed how much tranquillity and content of mind, affections which belong to the class of mental pleasures, or joys, contribute to good health. This is more remarkably the case with those who labour under chronic complaints of the stomach, liver, and intestines, occasioned, or at least kept up by various causes of mental inquietude; for as the serene and milder joys produce only a moderate increase of nervous excitement, and arterial action, they may,  
like

like all stimuli of moderate strength, be continued for a long time, not only without inconvenience, but with great advantage in the cure of chronic complaints. Like wholesome food, or exercise, in moderate quantity, they gently increase the action of the whole system of vessels, promoting absorption of chyle, secretion of new solids, formation of blood, and the ejection of useless and excrementitious matters. Hence, also, the good effects which music, and agreeable company, travelling, and the perusal of many works of genius, have in various kinds of melancholy, hypochondriasis, dyspepsia, apepsia, chlorosis, hysteria, and other chronic diseases, in which languor and debility of body, and dejection of mind form a principal part.

ALEXANDER TRALLIANUS, lib. xli. p. 17. mentions a remarkable case of melancholy entirely cured by means of joy. In PECHLIN, lib. iii. Obs. 27. is to be found the case of a person, called PEYRESKE, who was cured of aphonia and palsy by reading some favourite agreeable authors; and one CONTRINEUS relates

the case of a man being cured of a tertian fever by the same means. LORRY, de Melancholia, Tom. I. p. 37. describes the case of a person cured of a constriction of the pylorus, and incessant vomiting, by means of joy. In HELDANUS Obs. Med. Chirurg. Cont. i. Obs. 79. ELMULLER Opera, Tom. II. p. 11, and 95. various other similar cases occur.

It need hardly be remarked, that some people are much more disposed to be affected by such passions than others. People of a sanguine temperament, and, of what is called a cheerful disposition, have a strong feeling for the emotions of pleasure and joy, and as powerful an antipathy for all disagreeable and painful ones. Their aversion for the last kind of passions, and strong desire for the first, although they dispose them to become pleasant and agreeable companions, continually expose them to the risk of committing a number of moral transgressions; for the observance of our moral duties requires restraint, and a severe watch over ourselves; painful habits to be gained,  
terrible

terrible conquests to be made, by one of a sanguine temperament.

In regard to the effects which joy and its varieties have on the mind itself, I would observe, that it seems to dispose all its faculties for easy and ready action, stimulating it, as it were, in the same way as it does the brain. When the mind is under the influence of pleasure or joy, every task seems easy, every labour light. But let us take a separate view of each of the faculties as affected by this general state of mind.

Attention is employed with more energy, and seems to sharpen all the senses. People under the impression of gaiety, and those of a cheerful disposition, hear and see with more than usual quickness; their eyes are turned with celerity towards every object; their ears are open to every sound, their actions are quicker, and all bodily feeling more acute than usual. But attention, although exerted with more energy, is not exercised with constancy under the emotions of mirth and

gaiety, as is proved by its effects on the memory, the faculty of the mind the most dependent on attention ; for the objects that are thus examined, although they make a lively impression, are, yet, not long recollected. Bodies are not examined a sufficient length of time to be deeply fixed in the mind, and the remembrance of them, therefore, soon fades. The recollection, however, of past events, goes on easily under the impressions of joy, especially the recollection of such things as are naturally associated with the thoughts which are present to the fancy.

Under the impressions of joyful emotions judgment is quick, but on that very account it is not always correct. In a man, however, who is naturally endowed with a correct judgment, I believe that its decisions are not only quicker, but also more accurate when he is animated by joy, than otherwise.

The imagination, taking it in its most comprehensive meaning, is the faculty of the mind the most affected by this passion, and its  
various

various modifications ; many gay scenes, thoughts, and actions, are again represented in the mind by the influence of this playful faculty ; and fiction, taking its materials from past events, present circumstances, future pursuits, and the expected gratification of new desires, cheats the understanding with the view of many good and very desirable prospects, which, alas ! are seldom realized. We build many delightful castles in the air, which vanish the moment they are constructed. Our fortune and fame are represented to us with all the brilliant ornaments of success, and we lay the scheme of undertakings which are greatly above our strength or power ; we anticipate the pleasure they are calculated to yield ; the illusion vanishes, and we are disappointed ; and thus the house of joy becomes the habitation of mourning and pain.

Of all pleasurable passions, hope is the one which gives the greatest exercise to the imagination, as is naturally to be supposed, its object being that of future expectation. Of all the pleasurable passions it is the one which  
lays



lays the foundation for the greatest uneasiness, and mental injury; for as it is often more unreasonable than reasonable, we are exposed to frequent causes of disappointment and grief. This is particularly the case with the hopes attendant on vanity and pride, especially when they have been fortuitously raised, or extravagantly flattered. The state of pride, and the state of vanity, are species of pleasure, or mental gratification, founded on an erroneous judgment of a person's own superiority to the rest of mankind, or to a great number of men. This is a fixed and constant idea in the mind of those who are under the influence of such passions, and in the possession of which they feel great pleasure; but the hopes and expectations which are built on such unreasonable ideas of superiority, necessarily expose a person to frequent and cruel disappointments; and therefore the sudden transitions from the eager hope of almost certain success, to bitter disappointment, from the gratifications of self-love, to the pain of humiliation, give such shocks to the mental fabric of men as seldom fail to reduce it to a state of total ruin; therefore,

therefore, pride and vanity are frequent causes of insanity, especially with those who are not endowed with much fortitude, and resolution; more especially where judgment is weak. It is impossible to enumerate all the different kinds of pride or vanity, which give birth to insanity. In every society, however, in which riches and family honour are considered as circumstances that raise a man above the level of his fellow creatures, insanity must frequently occur; and hence the reason why we oftener find this disease arising among men who have become suddenly rich, and in titled families, especially new ones, particularly where a judicious education has not been instituted, than among any other description of men. Every powerful idea, whether pleasurable, or the contrary, when too frequently presented to the mind, tends to destroy that species of judgment which we call common sense; and by its direct operation on the brain to destroy the healthy functions of that organ; and, independently of the mischief which such powerful desire thus produces, another source of mental mischief arises from the pain which follows.

follows from the non-accomplishment of unreasonable wishes to which they gave birth.

The pride of riches, then, and of family distinction, and also all other kinds of pride whatever, without exception, such as that arising from power, from office, or from a notion of superior piety, may give birth to two very opposite kinds of insanity, I mean mania, and melancholy. The same thing may be said of vanity, and all its varieties: for when the notions which produce this passion are constantly present to the mind, a great train of imaginary happiness is produced, that increases until the person is, as it were, absolutely intoxicated. As often as these thoughts occur, the blood rushes with impetuosity to the head; the sentient principle is secreted in preternatural quantity, and the excitement is at last so often renewed, and increases to such a degree, as to occasion an impetuous and permanent delirium. But when the expectations, and high desires, which pride and vanity naturally suggest, are blasted; when these passions are assailed by poverty, neglect, contempt,

tempt, and hatred, and are unequal to the contest, they now and then terminate in despair, or in settled melancholy. The progress to these unhappy states of human misery will be described in the chapter on Grief. It may be remembered, however, at present, that the mania, and melancholy, which spring from pride and vanity, do not differ essentially from the mania and melancholy which arise from physical causes. Many authors consider pride as the most frequent cause of insanity; but, alas! it is only one of the frequent causes, many proofs of which have been already adduced, and many others follow.

As all ideas, productive of joy, and its modifications, act like direct stimuli to the nervous and irritable fibre, and as it is the essential property of all strong stimuli quickly to exhaust the principles on which the properties and energies of the living solids depend, we see the reason why excessive joy may become very prejudicial to the functions of the body. It leaves a languor and lassitude after it, like the effects of intoxication from strong wine,  
or

or spirits; and in many cases it has been known to exhaust the two principles of life so much as to induce swooning and fainting. The debilitating effect of extreme joy was observed by SANCTORIUS, and by him ascribed to a portion of the nervous fluid being forced out along with the perspirable matter. Dr. PARSONS, in his *Physiology*, ascribes it to the great determination of blood to the head, by which the heart and arteries are deprived of their usual stimulus. If the ideas and their impressions, which originally excited the passion of joy, continue to act with great force, after a person is almost exhausted by their first action, dreadful effects often ensue. I have known a temporary delirium arise from this cause. VAN SWIETEN, *Tom. III. p. 414.* mentions his having seen epilepsy produced in this manner; and the same thing is mentioned by his teacher BOERHAAVE, *de Morbis Nervorum, lib. ix. cap. 12.*

As all stimuli act more powerfully in proportion to the quantity of the principle called nervous energy, and the principle of irritability

lity redundant in the system, and as sorrow and grief, and what are called the depressing passions, allow these principles to be accumulated, we see one reason why sudden transitions from extreme grief to extreme joy, are at all times dangerous, and often mortal. The case of the Roman matron, mentioned by LIVY, lib. xxii. and taken notice of in the chapter preceding the last, is a remarkable instance of this kind. Various other causes are mentioned by different authors. “ In the “ year 1544, the Jewish pirate, SINAMUS TAFURUS, was lying in a port of the Red Sea, called Arsenoe, and was preparing for war, being then engaged in one with the Portuguese. While he was there, he received the unexpected intelligence that his son, who in the siege of Tunis had been made prisoner by BARBAROSSA, and by him doomed to slavery, was suddenly ransomed, and coming to his aid with seven ships, well armed: the joyful news was too much for him; he was immediately struck as if with an apoplexy, and expired on the spot. Innumerable other instances of a similar kind are to be met with, not only

only in modern but in ancient writers. The greater part of these are so well known to men of general reading; that I shall merely add a list of the authorities from which they are taken. VALERIUS MAXIMUS, lib. ix, cap. 12. relates the case of two women matrons who died of joy on seeing their sons return safe from battle at the lake Thraſes. One died while embracing her son; the other was suddenly surprized by the sight of her son while she was deeply lamenting his death. In HALLER's Physiology, Vol. V. p. 581, several other cases, and their authorities, are stated; and in THORESBY's Natural History of Leeds, p. 625, there is another remarkable case.

## CHAPTER III.

ON GRIEF, AND MELANCHOLY ; THEIR  
MODIFICATIONS, AND EFFECTS.

*Mental pain differs in degree as well as in the objects from which it springs ; the different appellations by which these are distinguished from each other. General corporeal effects of grief and sorrow described. Inquiry into the origin and nature of sobbing and sighing. Examination of the general principle upon which grief produces its peculiar corporeal effects. How grief produces syncope. What consequences ensue when this is violent or frequent. How deep grief often produces the phenomenon of sleep. How it terminates in confirmed melancholy. Difficulty of giving a good historical account of melancholy. Description of the origin and progress of melancholy. Its progress to suicide described. The nature of despair examined. How tædium vitæ occasions murder. The effects of religious melancholy ; a case. How despair*



*despair may cause the murder of an object of affection. When melancholy arises from particular causes, it is often considered as a distinct kind of insanity. Transition from melancholy to fury. How far the notion of predisposition is to be embraced in order to understand the nature of melancholy. Marks of predisposition to melancholy. The predisposition may either be born with a person, or accidentally excited. In what manner it is excited.*

**M**ENTAL pain, like mental pleasure, receives different appellations, according as it differs in degree of violence ; or as it springs from different causes.

As the scale of unhappiness, which reaches from the first sensations of distress to the very height of despair, is uninterrupted ; as there are no exact limits by which greater or lesser degrees of mental pain are to be accurately distinguished from each other, the terms we employ to denote them must necessarily be vague. The expressions which are made use of

of to denote a difference in the degree of mental suffering are these ; *distress*, *sorrow*, *deep sorrow*, *grief*, *melancholy*, *excessive grief*, *anguish*, and *despair* ; for whatever the particular cause is which excites the painful emotion, one or other of these expressions is generally employed to signify the degree of mental suffering which the person experiences ; for instance, a person may be *distressed*, *sorrowful*, *grieved*, *melancholy*, and driven to *despair* by a past event, which he foresees will affect his happiness ; or by a present event, or by one which is to come.

We are also apt to consider every variety of grief which arises from a distinct cause, as a distinct or separate passion ; and, accordingly, we give them different names.

Although they may be considered as differing from each other in kind, yet as they may also differ in degree, the affected person may make use of any of the above terms to denote his feelings.

The sorrow and grief which we experience on account of any past event, which arose from some act of our own, and which we conceive to have been blameable, may be called the pain of repentance, or contrition; a higher degree of this kind of pain is called *remorse*, of all painful feelings the most intolerable. When it does not arise from our own actions, but from some unforeseen accident, it is simply called *sorrow, grief, &c.*

We have no distinct appellations for the painful emotions we experience on account of a present event, which interrupts our happiness, except it be sudden and frightful; in which case we apply the word *terror*. Those kinds of sorrow that arise from some future event, which we foresee will affect our happiness, belong to the passion of *fear*, and its modifications, *anxiety, apprehension, and dread*.

Independently of these different painful emotions, we have others which accompany the passions, in which aversion principally prevails, such as anger, hatred, envy, jealousy, and

and shame, for in all of these we suffer more or less mental distress.

Sorrow and grief, are terms which are often indiscriminately applied to many kinds of painful emotions ; and hence it appears that they cannot, with propriety, be considered as distinct passions. Indeed, sorrow scarcely has a claim to be classed with the passions, as that word is commonly employed, for in many cases of sorrow, and anguish, the will is not excited into action by any distinct object. But, in the painful passions, strictly so called, such as anger and rage, jealousy and envy, there is always an object of aversion which excites volition into powerful action.

In the present chapter it is my intention to treat of grief and its modifications as general affections of mind ; but as some of the painful passions have effects on the body which are peculiar to themselves, I shall, afterwards, take these into separate consideration.

The general corporeal effect of all the modifications of grief and sorrow, is a torpor in every irritable part, especially in the circulating and absorbent system; hence the paleness of the countenance, the coldness of the extremities, the contraction and shrinking of the skin, and general surface of the body; the smallness and slowness of the pulse, the want of appetite, the deficiency of muscular force, and the sense of general languor, which overspreads the whole frame.

As the action of the extreme branches of the arterial system is greatly diminished, the heart, and aorta, and its larger vessels, and the whole system of the pulmonary artery, become loaded and distended with blood. The painful sense of fullness which this occasions, gives rise to a common expression, which is, in some degree, descriptive of what really exists; in sorrow the heart is said to be *full*, and in deep sorrow it is often said to be *like to burst*. A sense of oppression and anxiety, a laborious and slow respiration, and the remarkable phenomena of sobbing and sighing, naturally arise from this state of torpor, and retarded circulation.

Sobbing

Sobbing and sighing are peculiar to certain degrees and kinds of mental pain ; as laughter, jumping, and dancing, are peculiar to certain kinds of joy. They are not, however, of so intricate a nature as laughter. The way in which they are to be accounted for, is this ; as the blood is accumulated in a much greater degree than usual, in the large trunk of the pulmonary artery, and in the aorta, it is not so quickly oxygenated as it ought to be ; for the healthy oxygenation of the blood cannot take place except it be circulated with a certain degree of quickness ; but as it is the nature of our constitution that an obscure pain should arise when the actions which are necessary for our preservation are neglected, or impeded, and as this pain generally operates as a stimulus to excite these actions, so in this case the preternatural accumulation of blood about the heart produces an uneasy sense of fullness, to relieve which, we take a deep and quick inspiration ; and this constitutes the first part of sighing : but the debility arising from the primary action of grief being great, the breath is not retained, and slowly thrown out as in

ordinary respiration, but on the contrary, the whole quantity seems suddenly to escape, and hence the act of sighing is completed. By this means, the lungs being greatly distended with air, the large branches of the pulmonary veins are compressed, and a great quantity of blood is consequently forced out of the lungs. The blood is thereby oxygenated, and the congestion which had taken place on the right side of the heart, relieved. The oxygenation of the blood is the ultimate end of sighing, as, indeed, it is of every act of inspiration; the exciting cause is a physical one, namely, the distention of the larger blood-vessels of the pulmonary system: sighing, therefore, may take place in every case of continued grief, or sorrow, from whatever cause these proceed. It also often takes place from bodily causes, which produce a diminution of strength, or torpor in the whole frame, especially in the organs of respiration; and therefore we find that it is a common attendant on almost every case of chronic weakness, such as the various stomachic complaints which come under the denomination of dyspepsia; amenorrhea also, and hysteria, hydrothorax, péripneumonia

peripneumonia notha, all produce sighing; but sobbing is the peculiar effect of certain kinds of mental pain only. When the pain to which we apply the name of grief is powerful, and recent, and the ideas which give rise to it are of such a nature as to fall on the mind by repeated concussions, as it were, the sensorial impressions of these ideas are transmitted to the diaphragm with the same kind of forcible repetition as the ideas act on the brain. These impressions, when they arrive at the extremities of the nerves supplying the diaphragm, act like physical stimuli to that muscle, and throw it into an interrupted, convulsive action. On the one hand, therefore, the mechanical stimulus, arising from the distention of the pulmonary artery and vein, together with the want of oxygenation of the blood, which are circumstances common to all kinds of grief, are causes which produce the act of deep inspiration, and sighing; and on the other hand, the peculiar mode in which the painful ideas act causes the external air to be often interrupted, and thus the phenomena of sobbing are superadded to those of sighing.

Upon



Upon what general physiological principle do grief and sorrow act, so as to produce the various phenomena before mentioned?

The common way of accounting for them is, by saying that grief and sorrow, and their modifications, are depressing, or debilitating passions; and hence they always occasion a diminished action which must be followed by general torpor and languor. But this is not explaining any thing; for the question is, in what way do they produce this depression of vital energy, this sense of universal weakness and languor? In the chapter on Irritability I endeavoured to confirm the opinion of the late Dr. JOHN BROWN, that debility may be produced by very opposite kinds of causes: *first*, directly, by withdrawing or diminishing the quantity of natural stimuli which support all action, and, *secondly*, by the action of too great stimulants; by which the whole body, or the parts on which their action is exerted, are left in a state which is very properly called *indirect debility*. It is to be recollected that the stimuli which produce indirect debility are of two kinds, one of which evidently excites ac-  
tion

tion in the vascular system, the other exhausts the principles of life quickly, but in a very obscure manner, without any evident previous increase of vascular action whatever. The debilitating powers of grief seem to operate in this last mentioned manner; they exhaust the irritability of the system without a previous increase of vascular action. When a person is suddenly informed of some melancholy event that deeply affects his life, fortune, or fame, his whole strength seems at once to leave him; the muscles which support him are all relaxed, and he feels as if his knees gave way under him. In many cases he actually sinks down. In some people the sensorial impression exhausts the irritability so completely as to cause the action of the heart and arteries, and organs of respiration to cease, and the person then falls into a swoon, as it is called. The irritability is slowly and scantily regained during this swoon, and therefore it often continues a great length of time. When it is sufficiently accumulated in the system to render the person sensible of the common external stimuli, such

as heat and light, he awakens from the torpid state in which he lay, but then the melancholy thought may again recur to his mind, in which case it again produces a renewal of the *syncope*. This effect may take place repeatedly, and ultimately lay the foundation for many chronic complaints of the nervous kind.

Causes of deep grief, when not clearly foreseen, may, in certain habits, exhaust the irritability and power of the nerves so much, as to produce all the phenomena of sleep. This sleep is generally of the comatose kind, or mixed with catalepsy. Of both these kinds of insensibility, I have seen very remarkable instances, in which this state of torpor has continued several days, during which the person has not taken any food whatever.

When grief or sorrow continue permanent for a great length of time, they occasion much disorder, both in mind and body, from which the disease called *melancholy* originates. But it is to be observed, that, although it is generally

nerally considered as a disease of the mind, and appears for the most part to arise from mental, or moral causes; yet it certainly seems at times to arise from an hereditary fault of the constitution, for it often pervades several branches of one and the same family: it becomes, then, a matter of doubt, how we ought to proceed in our inquiry. If we follow the progress of grief until it terminates in melancholy and delirium, we may appear to be merely giving a history of that passion; and if, on the other hand, we break off at this place, and begin a description of melancholy, considered as a distinct disease, and as it arises from constitutional and corporeal causes, we may be blamed for want of method, and for having left the history of Grief incomplete. It is worthy of remark, that when melancholy takes its source in constitutional and corporeal causes, yet to a superficial observer it always appears to be the effect of occasional grief and sorrow; for the most striking character of the disease is dejection of mind, or constant sadness, and in fact the aberration of reason which so frequently occurs in this complaint is generally the immediate offspring of melancholy

choly ideas; and again, as deep grief when greatly augmented, terminates in despair, and as the ideas which disturb the happiness of a melancholy patient often do the same, and, also, as despair, whether it arises from grief accidentally excited, or from the disease called melancholy, generally terminates in a similar manner, it is evident that by tracing and finishing the history of Melancholy, we also complete, in a great measure, the history of Grief. I am about to shew, then, the progress of grief and melancholy, as they terminate in despair, suicide, and murder; but it is to be recollected that these are far from being the constant effects either of grief or melancholy; they are only occasional ones, though, unfortunately, they happen but too frequently. Grief, however great, may gradually subside; and melancholy, in certain constitutions, never produces greater mischief than dejection of mind, and gradual decay, or consumption of bodily strength, which the patient sustains for many years, and then dies exhausted. Now, as grief and melancholy have various terminations, it becomes necessary to take a full view

view of one before we proceed to another, and therefore, after having displayed the nature of the delirium which now and then arises in melancholy, we shall return to the other terminations of the passion, and give a complete history of the mental character of this complaint. After having done this, the attention must be turned to the corporeal causes.

When any cause of deep grief and sorrow is present to the mind, it frequently gains such a force as almost totally to exclude all thoughts except those which, upon the principle of association, are connected with it. As the attention is strongly excited by it, a person feels an irksomeness when much exposed to impressions on his external senses; for although these impressions do not produce a clear representation in the mind, inasmuch as the attention of the person cannot be directed for a sufficient length of time to them, yet they necessarily reach the mind, and, as it were, irritate it. There is no cause which prevents the external impression from being conveyed to the brain, and when it produces a sensorial

forial impression there, it operates in a slight degree on attention, so as to withdraw it for a second or two, but the attention is immediately afterwards re-excited by the prevailing ideas; and thus, when a melancholy person is exposed to strong impressions on the external senses, he experiences an uneasiness or mental irritation which is much more insupportable than grief itself; he therefore avoids society, and the conversation of his friends; he loves quiet, solitude, and darkness, and in these he broods in silence on the thoughts which seem to him so materially to affect his interest or happiness.

The melancholic person, for similar reasons, avoids bodily exercise; and thus, that which is a first effect of the debilitating powers of these mental affections becomes an agent of greater debility. Indeed, this is altogether the character and nature of every painful passion. Every effect becomes an active cause of a new series of baneful consequences. The loss of vital energy which is occasioned by grief, or sorrow, and the want of exercise, cause a deficiency of appetite and of  
the

the powers of concoction and chylication. Nor is this to be wondered at when we reflect on the torpor which pervades the whole frame, and the great alteration which grief occasions in the circulatory system. The want of action in the vessels of the skin occasions a sympathetic affection of the stomach. There is a singular affection of this organ which is almost peculiar to grief; it consists in a violent pain, which is commonly felt at the pit of the stomach, and is often so great as to cause the person to emit deep and involuntary groans, or moanings; when it is very violent it generally terminates in a regular hysterical fit, or in convulsions, or in a mild and low delirium, which seldom continues above twelve hours. Of this singular affection I have lately met with several cases, all of them proceeding from deep grief. This pain might easily be mistaken, in some cases, for gastritis, or inflammation of the stomach, if a person was not very attentive to all the symptoms; for it often is permanent for some days, during the whole of which time the patient vomits whatever is swallowed. Now the constant  
and



and acute pain, and the vomiting on taking food, might easily deceive a practitioner. It may be distinguished, however, from gastritis by the pulse, the state of the skin, and the general expression of the countenance; for the pulse is seldom quick, and the skin is generally cold, and, to a discerning eye, the disease may often be read in the looks of the patient.

As a physician, however, like every other man, may be deceived in the judgments he forms from any expression of countenance, especially as bodily pain often causes the features to assume the look of dejection, and sorrow, he must not trust to it alone. I have seen this kind of gastrodynia, in two instances, followed by an hæmorrhage from the stomach, lungs, and uterus. This painful affection from grief is almost peculiar to females, for, on their delicate frame, mental causes of every kind operate, in general, much more powerfully than on men.

As grief and sorrow, and their modifications, cause a preternatural accumulation of  
blood

blood in the larger blood-vessels, owing, in a great degree, to the torpor and inirritability of the heart and arterial system; and as the vessels of the liver are, from their size and situation, liable to be much affected by all such changes, it is natural to imagine that the functions of this viscus should be greatly changed, owing to the unusual load of blood which is thrown on it; and the unusual slowness with which it is circulated. There can be no doubt that the bile, in many melancholic patients, is completely altered from what it is in health. In a great number it has been found of a deep green colour, in others of a dark brown, and in others of a brownish black. In many, especially in those in whom it is found of a dark colour, it has been observed to be preternaturally thick and tenacious. This circumstance is taken notice of, not only by HIPPOCRATES and GALEN, but is very particularly described by the celebrated BOERHAAVE, who says, that the black bile of melancholic patients is of a thick consistence, like pitch. But this assertion is not exactly true; for although the bile is often changed in

in

in its qualities, yet I have met with many, in whose alvine evacuations there were no appearances which indicated any such alteration to have taken place; and I am inclined to believe that when it does occur in melancholy patients, it is always to be considered as the consequence of the disease, and not as the cause, which the Greek physicians supposed it to be. That such bile produces mischief when once it is formed, cannot be doubted; and as diseases of the abdominal viscera, more especially those of the stomach and liver, occasion feelings of anxiety, and the feelings of anxiety occasion dejection of mind, it will, doubtless, tend to aggravate the primary complaint. The stomach becomes disordered, the action of the intestines becomes irregular, the secretion of bile is altered, and the patient is troubled with flatulency, sympathetic head-ach, vertigo, and many other distressing symptoms; LORRY, de Melancholia, Tom. I. p. 180, and BAGLIVI, Prax. Med. lib. i. cap. xiv. f. 4, and FR. HOFFMAN, Med. Syst. Tom. IV. p. 377. narrate cases of jaundice, and dropsy, arising from

from long-continued grief. ALEX. TRALLIEN, lib. i. p. 16. mentions a case of palsy, and BONETUS a case of aphonia, Med. Sept. lib. ii. sec. xviii. cap. iv.

The faulty state of the stomach and intestines, and the neglect of food and exercise, soon cause a great change in the countenance of the patient. The whole fat is absorbed, and the face grows thin and emaciated, and its muscles weak and relaxed; the adipose support of the eye-ball is gradually diminished; and hence the sunken eye, and hollow socket. The bloom of health disappears, and the whole countenance grows pale and dejected. Together with these physiognomical *insignia* of grief, there is another which seems to strike all painters, but which is neither a constant or peculiar attendant on this passion, for it is common to many others; I mean the eye-brows being drawn together, and a little downward at the same time, as if the person frowned. This action of these parts arises whenever attention is deeply engaged with any idea; and as I have already said, is by no

means peculiar to grief. It is, surely, needless to observe, that if these disorders are not corrected, the strength and health of the person must ultimately give way.

This disordered state of bodily health, as it is a source of many painful feelings, necessarily augments the unhappiness of the sufferer, and gives him a strong disrelish for life; for what can attach a man to the world if it be not the enjoyments he derives from his existence, or else a strong sense of moral duty. No man, however, who is oppressed with grief, and who is constantly preyed on by mental and bodily pain, can be supposed capable of exercising his judgment at all times correctly; a fresh misfortune, imaginary or real, excites an irresistible desire of relief: tired out, hopeless, dismayed by the threatening aspect of many a bursting cloud; discerning nothing, which ever way he looks, but a dreary and comfortless life, how can he be supposed capable of taking a clear, calm, and comprehensive view of the obligations he owes his Creator, or society; or of reflecting on the sudden vicissitudes

tudes which daily occur in human life, and on which every man may safely form some hope, even in the most distressed situation? The wretchedness of life, is the only picture present to the mind of one in whom grief has terminated in such a state of deep melancholy; the only objects of comparison are the misery of existence, on the one hand, and the relief he can obtain by withdrawing himself from it on the other.

What if some little payne the passage have,  
That makes frayle flesh to fear the better wave?  
Is not short payne well borne that brings long ease,  
And layes the soule to sleep in quiet grave?  
Sleep after toyle, port after stormy seas,  
Ease after warre, death after life, doth greatly please.

SPENSER.

Such is the picture of that state of mind which is called despair, and which causes a man to form the resolution of suicide. It may be considered as a delirium, inasmuch as it is impossible for the person to use his judgment correctly; and yet, in a philosophical point of view, it may be contended that our judgment

ment is never more correct. Judging arises from the comparing of thoughts; and every object that employs judgment has its allied ideas, which are the objects of comparison: but if no other thoughts can come into a man's mind than the wretchedness of his life, and the relief he is likely to obtain by death, and that his feeling of wretchedness is augmented by fresh misfortunes, and bodily disorder, it cannot be expected that the judgment will be the same as in a man who is influenced by strong religious and moral principles, and who considers at the same time, that an act of suicide is a crime of the highest nature, because it is a violence offered to the established laws and evident end of human existence, as an injury done to society by the bad example it sets, and as an injustice to his family, by the disgrace which it imparts to them.

The ideas which drive a person to despair, and to the determination which has been mentioned, are as various as the sources of human affliction; the dread of poverty and want, the hopes,

hopes, in which we often injudiciously place too much of our happiness, intirely blasted ; either honest or false pride humbled by public or private contempt ; ambitious views suddenly and unexpectedly disappointed ; and added to these, the pains of the body ; such is the general character of the motives which lead to the commission of suicide. These are real motives, the ideal ones are not less numerous ; for when once an idea, by its being often presented to the mind, has gained such a degree of force and vividness as to command belief, it is of no consequence as to its effects, whether it originated in a real or an imaginary cause. There are two very common ideal sources of despair, that terminate in suicide, which may be mentioned here, though they have already come under our observation : the one is religious despondency, or a belief that a person is forsaken by the Almighty, or is an object of his anger, and cannot be forgiven ; and the second is the idea that a person is so much bereft of understanding as to be totally unfit for the discharge of the common duties of life. The first of these is often accidentally

excited



excited by the injudicious, I had almost said criminal, misrepresentation of the intentions of the Almighty towards individuals, which many Methodistical orators paint in such language as cannot fail to strike terror into weak minds, to the great injury of society, and the ruin of private tranquillity.

The other diseased ideas, which it has been said terminate, at times, in despair, are the notions that a person is deprived of the powers of reason, and, consequently, must sink into poverty, and become a burthen to his friends. I have to observe, that such ideas seldom originate but in those who have some hereditary disposition to melancholy, and whose nervous system may therefore be supposed to be easily disordered, so as to yield obscure, painful impressions. They may, doubtless, also arise from imprudent over-straining of the faculties, as happens in men who have spent the greatest part of their life in intense study; for in such cases the frame becomes weakened and diseased for want of exercise, and the mind being too much excluded from gay, agreeable impressions,

impressions, the nervous principle also being greatly exhausted, diseased feelings, and diseased ideas are thereby apt to be produced.

Instead of taking up much time in endeavouring to draw a picture of the general train of thoughts, which succeed each other in the mind of a person who is affected by this melancholy and painful impression, I shall extract and translate a few passages from the journal of a self-murderer of this description, which are contained in Vol. I. of the Psychological Magazine, which, with a few exceptions, depending on difference of situation, country, and education, may be considered as a general portrait of what passes in the minds of all such men, for some time previous to the accomplishment of the horrid deed.

“ It has pleased the Almighty to weaken  
“ my understanding, to undermine my reason,  
“ and to render me unfit for the discharge of  
“ my duty. My blood rolls in billows and  
“ torrents of despair—It must have vent—  
“ How? I possess a place to which I am a  
“ dishonor,

“ dishonor, inasmuch as I am incapable of  
“ discharging it properly—I prevent some  
“ better man from doing it more justice.  
“ This piece of bread, which I lament is all  
“ that I have to support myself and family,  
“ even this I do not merit; I eat it in sin,  
“ and yet I live! Killing thought! which a  
“ conscience, hitherto uncorrupted, inspires—  
“ I have a wife, also, and my child reproaches  
“ me with its existence. But you do not  
“ know, my dear friends, that if my unhappy  
“ life is not speedily ended, my weak head  
“ will require all your care, and I shall be-  
“ come a burthen rather than an assistance to  
“ you. It is better that I yield myself a timely  
“ sacrifice to misfortune, than by permitting  
“ the delusion to continue longer, I consume  
“ the last farthing of my wife’s inheritance—  
“ It is the duty of every one to do that which  
“ his situation requires—reason commands  
“ it—religion approves. My life, such as it  
“ is, is a mere animal life, devoid of reason:  
“ in my mind, a life which stands in opposi-  
“ tion to duty is moral death, and worse than  
“ that which is natural. In favour of the few  
“ whose

“ whose life I cannot render happy, it is at  
“ least my duty not to become an oppression.  
“ I ought to relieve them from a weight  
“ which, sooner or later, cannot fail to crush  
“ them.”

It would be tedious, and it is quite unnecessary to translate more of this journal, since it is all in the same strain as the above. Mr. GLAVE, an Aulic counsellor, and government minister, at Insterberg, who sent the papers to the editors of the Magazine, says, that the unfortunate man sent his wife to church, on Sunday, May 13th, 1783, and after writing an addition to his journal, he took a pair of scissars and cut his throat, but did not kill himself. He then opened the arteries of the wrist, and again failed in destroying himself; he staggered to the window, and saw his wife returning home, upon which he seized a knife used for killing of deer, and stabbed himself in the heart. He was lying weltering in blood, when his wife came in, but was not quite dead. Mr. GLAVE adds, that he was a man of understanding, and of a lively wit.

He

He possessed a great deal of theoretical learning. His heart was incorruptibly honest. Like every calm and determined self-murderer, he was proud; but his pride was not the pride of rank, of riches, or of learning; but that divine pride which arises from a consciousness of incorruptible honesty, and of being possessed of good powers of mind. The office he held was that of assistant judge, in a small and lately instituted college of justice, at Insterberg. His mother had been once deranged in her mind.

Another very common termination of despair is in murder. A person may be determined to this act by a variety of thoughts; a melancholic person may falsely imagine that his relations and friends are combined to ruin him, or kill him; his fears and anger point them out as objects of revenge; if it proceeds from poverty, he may consider the destruction of his wife and children as a means of liberating them from pain. A person driven to despair by disappointment, or persecution, is stimulated to murder, in general, from a kind  
of

of passion approaching to the nature of revenge, as is the case of many disappointed lovers. But there is another very frequent cause of murder in such people, I mean a strong inclination which they have to terminate their own existence. That a man whose health of body and energy of mind are greatly weakened and disturbed, and who has no other thought which engages his attention but his own miserable situation, and who in addition to such circumstances has probably to contend with poverty, obscurity, disappointment, and neglect, should at last give way to the force of his desire for death, and lose all command of mind, and put a voluntary end to his existence, are circumstances which do not require any further elucidation; or that a man driven to despair by a repetition of misfortunes, and who yields to the idea that he is entirely cut off from every hope of relief, should do the same thing, is also sufficiently intelligible; but it is a matter of curious inquiry to attempt a discovery of those acts of judgment, which prompt such miserable men, whose only object is to escape from life, to transfer the act of cruelty from their

their own persons to those of others. The generality of people are satisfied in a very easy way concerning this singular phenomenon. They say such men are mad; what necessity, then, is there for any further inquiry into the reason of their actions? To which I answer, that as no madman ever commits a voluntary act \* without a motive, the question of curiosity is, What motive it is which prompts such a person to destroy an innocent being, and perhaps the one he is most fond of, while the principal desire in his mind, and which, in a great degree, occasions his erroneous judgment, is the wish of putting a period to his own existence; for I hope I need not repeat, that it is of such men only that the present question is. The fact itself is too notorious to be denied; the first phenomenon by which despair, arising from a desire of ease from pain through the medium of death, exhibits itself, is often the murder of another.

\* Let not this expression be confounded with a *reasonable act*, as is too frequently the case in common conversation.

In many instances it evidently springs from an erroneous judgment in regard to the nature of crimes. A person bent on death thinks it less criminal to destroy another than to commit suicide. The idea in his mind is, that he is forcibly put to death in the one case, whereas in the other he counteracts the laws of nature; and in general this notion is combined with very false religious opinions. The two following cases which put this matter in a clear point of view, and exhibit the whole train of thoughts which impel people to such acts, are both of them translated from the *Psychological Magazine*. The first is related in Vol. III. part 3, p. 35, and the other in Vol. I. part 2. p. 10.

Case I. “ A young woman, MARGARET K.  
“ 23 years old, was sent to the house of cor-  
“ rection, in Onolzbach, in Sep. 1755, on  
“ account of various misdemeanours which  
“ she had committed. She was received, as  
“ such persons usually are, with blows and  
“ stripes. One of the blows of the whip  
“ made use of for this cruel purpose wound-  
“ ed



“ ed her feverely in the left breast, and gave  
“ her the most acute pain. This treatment  
“ made so deep an impresson on her mind,  
“ that she began to detest life, and in order  
“ to get rid of it she determined to commit  
“ murder. She thought that by so doing she  
“ would have time allowed her for repentance,  
“ which she knew she could not have were  
“ she to destroy herself.

“ She premeditated her design in cold  
“ blood, and accomplished it on another wo-  
“ man in the following manner :

“ One Sunday she complained of being ill,  
“ and requested to be excused from attending  
“ divine service. A simple and half-fatuitous  
“ girl, of the name of MEDERIN, was allowed  
“ to attend her. MARGARET K. convinced  
“ this girl that there was no hope of their  
“ being relieved from their present miserable  
“ situation but by their both consenting to  
“ die ; and she proposed to MEDERIN to kill  
“ her first. The girl was soon reconciled to  
“ the proposition, and the only condition she  
“ made

“ made was that her companion should not  
“ hurt her. She stretched herself out, and  
“ the murderers accomplished the horrid  
“ crime by cutting the girl’s throat. MEDE-  
“ RIN sustained the blow with perfect re-  
“ signation, and died soon after.” I inter-  
rupt the relation at this part merely to say,  
that I omit translating those passages in the  
original which describe the cruelties that were  
inflicted on this unhappy woman on her first  
reception in the house of correction, and  
which occasioned her crime. They only prove  
with what inhumanity many of the keepers of  
such places abuse their power. I proceed to  
translate that part of her examination which  
throws light on the state of her mind.

“ Upon being asked, in the court of justice,  
“ what could induce her to commit so horrid a  
“ deed as the murder of her fellow prisoner, she  
“ answered, fear for the sharp blows, and pain  
“ she knew she had to sustain in the house of  
“ correction. She thought within herself, If  
“ I take away my own life, my soul is lost for  
“ ever ; but if I murder another, although in  
“ that

“ that case I also must forfeit my life, still I  
“ shall have time to repent, and God will  
“ pardon me. When she was asked if she had  
“ no hatred against the deceased, or if she had  
“ ever received any ill-usage from her, she  
“ answered, ‘ That the deceased had never  
‘ done her any injury ; and if any thing vexed  
‘ her (the deceased), she always came to her  
‘ to make her complaints.’

“ Upon being asked if she slept quietly  
“ after having committed so horrid an act,  
“ she answered, that ‘ she prayed to God be-  
‘ fore going to bed, and slept well, and when  
‘ she awoke, she again prayed.’

“ She appeared perfectly calm and collected  
“ during her trial, and until the nature of her  
“ crime was explained to her ; and when she  
“ understood that so far from her having taken  
“ the road to happiness, she had drawn the  
“ eternal wrath of God upon herself, she wept  
“ bitterly.

“ The

“ The physician who attended her ascribed  
“ the crime to despair, and *tædium vite*; but  
“ the law would not understand the hint.”

“ DANIEL VOELKNER was born in Fried-  
“ land, six (German) miles from Königs-  
“ burg, in Prussia. He lost his father when  
“ he was fourteen years old, about which  
“ time he was put apprentice to a shoemaker.  
“ After his apprenticeship was finished, he  
“ went to Dantzic, with a view of prosecuting  
“ his trade; but before he could get work  
“ enough to support himself, his travelling  
“ chest, containing all his tools, was stolen  
“ from him.

“ As it was not possible for him to work  
“ without these, he enlisted himself for six-  
“ teen years in the service of his Danish Ma-  
“ jesty, and was sent to Copenhagen.

“ Although, according to his own account,  
“ he experienced many hardships from his  
“ officers, yet he completed his sixteen years  
“ duty; after which he resolved to visit his

“ native home ; but on his journey thither  
“ he met with a discharged foldier, whose  
“ name was VORMAN, and who was a free-  
“ man, and shoemaker, in Meyburgh, on the  
“ borders of Mecklenburg. He engaged  
“ himself with this man, but the business did  
“ not please him, and he quitted it the same  
“ day he began it. He went to an alehouse,  
“ and enlisted himself in the cavalry, and on  
“ the 11th of March, 1753, was draughted  
“ into the regiment of Winterfheim.

“ It would appear, that from this period to  
“ May 23d, murderous ideas sprang up in his  
“ mind ; and, unhappily, it also appeared  
“ that these owed their origin to religious  
“ enthusiasm. His ideas of the happiness of  
“ a future life were of the most vivid kind,  
“ since they terminated in weariness of life,  
“ and in the desire of throwing off his mortal  
“ burthen. The only way which presented  
“ itself to his mind to obtain this desirable  
“ end was to forfeit his life by murder ; after  
“ the accomplishment of which act, he ima-  
“ gined

“ gined he would have time enough to make  
“ his peace with God.

“ According to the testimony of his com-  
“ rade and bedfellow, THOMAS GEIMROTH,  
“ this man lived a pious life, singing religi-  
“ ous hymns, and reading godly books, one  
“ of which he offered his companion, for his  
“ edification. He often admonished GEIM-  
“ ROTH to become devout, adding, that he  
“ himself had been very wild in his youth,  
“ but that he now was in the right way.

“ One night, when in bed, the idea of  
“ teasing VOELKNER a little, on account of  
“ his extravagant piety, occurred to GEIM-  
“ ROTH; he said, he looked upon it to be a  
“ thing unreasonable in some people to act so  
“ uncommonly devout a part, as if with a  
“ view of making it appear that they alone  
“ merited happiness hereafter. Upon which  
“ VOELKNER answered, it was extremely un-  
“ just in him to think so, and immediately  
“ began to cry out, *I must, I will be happy here-*  
“ *after.* These words he repeatedly uttered

“ with a loud and harsh voice, tossing his legs  
“ and arms about in a violent manner, and  
“ starting from one part of the bed to ano-  
“ ther. After this idea of his being deter-  
“ mined, with all his might, to become hap-  
“ py had dwelt some time in his mind, he  
“ broke forth in sorrowful complaints about  
“ his past life, and began to exclaim, *I am*  
“ *come to this at last ; I am come to this at last ;*  
“ which words he repeated three or four times.  
“ Upon his companion asking him to what  
“ he was come ? he answered the same thing.

“ According to VOELKNER’S own testimony,  
“ he had long entertained the idea of murder-  
“ ing a child, because he thought that after  
“ having confessed, and made his peace with  
“ God, he would soon reach that place, and  
“ that happy life for which he fighed. Three  
“ weeks previous to the act, he suffered  
“ indescribable anxiety, and uneasiness. It  
“ appeared to him as if he was obliged to  
“ kill some one. On some nights he slept  
“ well, on others not at all ; but the idea  
“ of

“ of murdering some one always returned with  
“ the light of day.

“ Three days before he committed the  
“ crime, he went to the church-yard, and  
“ played with the children who were there,  
“ intending, if he had an opportunity, to kill  
“ one of them.

“ At last, on the 23d of May, in the even-  
“ ing, he accomplished his horrid purpose.  
“ A little girl, who had a companion at the  
“ house where VOELKNER was quartered, came  
“ that evening to pay her a visit. The landlord  
“ of the house, and his comrade, were both  
“ gone out about an hour before. VOELKNER  
“ invited the two little girls to his room, and  
“ divided between them his supper ; immedi-  
“ ately after which, placing his hand on the  
“ forehead of one of them, he bent her head  
“ back, and with a knife, which he had  
“ sharpened on purpose a day or two before,  
“ he cut her throat. He then went to the  
“ guard-house, surrendered himself, told what  
“ he had done, and acknowledged that it now  
“ caused



“ caused him much regret. He was immediately taken to prison, where he slept calmly the whole night, for he acknowledged that the uncommon uneasiness he had experienced for three weeks before ceased upon his committing the act.

“ During his examination he answered like a reasonable man, and expressed himself with precision, behaving himself decently, both in word and deed. He narrated the principal circumstances of his life, and said he knew perfectly well what consequences were to be expected from such an action, and that he would be obliged to answer it with his blood. But this thought was, at that time, by no means disagreeable to him.”

It would appear that murder may, in certain cases, proceed in a melancholic person, and as an effect of despair, from tenderness towards the victim; the idea which inspires this horrid determination of mind is, that of saving the beloved object from the same causes  
of

of painful distress and affliction which prey on the spirits of the insane person. Such a resolution as this seldom takes place until a kind of delirium occurs; but this delirium is always of short duration, and occasioned by one or more painful ideas, which are dissipated by the act; and hence, to the generality of people, the patient appears after the act has been committed, as one who has the use of reason. It is not like the delirium of maniacs, which arises from a diseased action of the blood-vessels of the brain, and is totally independent of any mental cause, and is, also, permanent for a considerable length of time, but it is a temporary loss of judgment, or rather, it is a sudden erroneous judgment, from the action or renewal of painful thoughts.

CATHERINE HAUSLERIN, forty-five years old, was an inhabitant of the village of Donauworth. She had been twelve years married to a man of a severe and unfeeling temper; and, excepting a fever, and some slight irregularities in regard to her menstrual

strual discharge, was a tolerably healthy woman.

About the end of the year 1785, she was detected in stealing milk in the village where she lived. She solicited, in the most earnest manner, that the circumstance might be concealed from her husband, whom she dreaded, and she obtained a promise to that purpose; but it was not observed. At first he was told of it in an obscure way, but he afterwards discovered the whole truth.

It appeared from the testimony of several witnesses that the detection of her fraud had made a deep impression on her mind, not only on account of her good name, but also on account of the treatment she was likely to receive from her husband, and that in consequence of this, she became low and melancholy. It appears also, from the registered account of her trial, that she had confessed, and yet (what is very uncommon with Catholics), it did not relieve her mind, for she prayed often without knowing what she

she said ; and she had been frequently seized with violent head-achs, during which she was not conscious of what she did.

It was the 1st of December, 1786, before she learnt with certainty that her tyrannical husband was acquainted with the theft she had committed. He had often threatened, before that time, to kill her if the report proved true ; and he now beat her severely. In the court of justice, however, she did not seem to have any recollection of the ill-treatment she had received.

Upon being asked how often her husband had beaten her, she answered, she did not know ; her husband knew ; she herself had no memory.

After this treatment, she went to bed, trembling for fear, and dreading worse usage the next day. Her daughter, a little girl about seven years old, came to her bedside, and prayed with her. She had formed the resolution of leaving her husband, and asked

her

her daughter if she would stay with her father. This the girl refused to do, as she was afraid of him. After praying devoutly, early in the morning, she left her husband's house, and took her daughter along with her, and also her infant, which was only two months and a half old. As she was about to depart, she again asked her daughter if she would not rather live with her father; but the girl answered she would rather die. The thoughts which this answer occasioned in the mother's mind, the misery and distress which surrounded her, the fear of what might happen to her children in case she died, and, at the same time, her own ardent wish to finish her existence, all these things caused her to form the barbarous resolution of drowning them.

The infant she took in her arms, and being arrived at the border of the Danube, she caused her daughter to kneel down and pray to God to deserve a good death. She then tied the infant in the arms of the girl, blessed them by making the sign of the cross on them, and threw both into the river. She afterwards  
returned

returned to the village and told what she had done. *Psychological Magazine*, Vol VI. part 3. P. 47.

Grief and melancholy do not always terminate either in a gradual atrophy, or in despair. They may be preceded, and are often followed by, a state of fury, as has already been observed in the chapter on Delirium; and, independently of this, it may terminate in that mild kind of delirium in which some imaginary object of thought, accidentally excited, commands a person's firm belief.

The termination of melancholy in furious delirium, or in a state of mania, is, perhaps, one of its most common changes. Previous to the commencement of this violently disordered state of the brain, the patient is generally observed to be more absent and melancholy than usual; he is more silent, also, but yet there is something wild and alarming in his looks. He is, at times, greatly disturbed by his thoughts, and always appears more or less confused, just as if there

was a beginning intoxication, which deranged not only the impressions of external objects, but also the sensorial ones which arise from his ideas.

Why melancholy should, in one case, terminate in, or at least alternate, with a state of furious delirium, having all the true character of mania, and, in another case, be succeeded by a very mild aberration of reason, in which not only the thoughts, but the actions of the man are inoffensive, as in the case which follows, is certainly a very interesting subject of inquiry ; but at the same time, a very intricate one to develop. The physical constitution of the patient ought always to be taken into account ; and it is, perhaps, of all causes the one which has the most influence in producing one or other of these events just now mentioned, especially when they are excited by mental causes. The disposition to irascibility of temper, and to good humour are born with people ; for we see these two extremes of mental character evidently marked in the conduct of different infants, long before education can

can have produced any effect on them. Education, indeed, may correct and improve, and also hurt and spoil what nature has done; accordingly we find, on the one hand, that by means of a judicious controul, violence of temper may be softened; and, on the other hand, a natural amiableness of temper may be rendered rough and offensive by example, or by unwise management; but still the natural character shall, at times, break forth. No set of men have greater opportunities of observing this than physicians, who see mankind under the influence of such causes as must necessarily destroy the effects of artificial habits. Those whose nerves are disposed from birth for the easy reception of pleasurable sensations, in whom all the actions of the different sets of vessels go on with freedom, and who consequently are of a cheerful disposition and amiable temper, preserve the natural character of that disposition in every disease. If they suffer either from corporeal or mental causes, they for the most part exhibit much patience and resignation; or if they do express the pain which they experience, it is in gentle

2

terms,



terms, such as always beget more pity and sympathy in the breast of the by-standers, than the impetuous and often unreasonable complaints of those whose disposition is so much opposed to this; for this other class of men are born with nerves acutely sensible, and easily irritated, and hence they are constantly exposed to causes of inquietude and pain. While children they are fractious, ill-tempered, and unruly, and although the offensive points of such a character may be worn down by a judicious mode of education, and they may be taught a considerable degree of self-command, yet when under such impressions as destroy the degree of attention which is necessary in every act of judgment, the natural phenomena of pain break forth, and they become peevish, quarrelsome, and unreasonable; and this conduct is always augmented by the injudicious concessions, or compliance of their attendants and friends.

The individuals of both these classes may, doubtless, be seized with mania, and that of an impetuous and ungovernable kind, the  
only

only difference being in degree ; the one being much more unruly than the other ; but the violence of temper which occurs in this disease never takes place except the mania originate from corporeal causes, and in such as are strongly predisposed to insanity. Corporeal, or physical causes may occasion such an uncommon degree of increased arterial action in the brain of the one as well as that of the other, as shall be productive of this violently deranged state ; but when mental causes of distress operate on these two classes of people, their effects are generally very different ; for mental pain, like corporeal pain, is borne with much more ease by the one than by the other, and accordingly we find that when melancholy is thus produced in them, it assumes a different character : in the one case, it is not long borne, if the causes of grief be severe or frequent, without producing despair and its attendants ; or else it terminates in a furious delirium ; but in the other case, the causes of mental pain, although acute, and often irremediable, shall be sustained with great patience, and when the judgment at last begins to

to fail, and a delirium ensues, it is generally of a mild, though of an equally obstinate kind as to its removal. Of the first kind of delirium, succeeding melancholy from mental causes, some cases have already been adduced; of the other, or milder kind of delirium, succeeding melancholy from mental causes, the following appears to me to be a striking instance.

“ CHRISTIAN GRAGERT, one of the *Gens*  
 “ *d’arms* of Berlin, was of a harmless and  
 “ quiet disposition, but rather of a super-  
 “ stitious turn of mind. He frequently un-  
 “ derwent harsh military discipline, on ac-  
 “ count of a natural stiffness in his joints,  
 “ which prevented him from marching and  
 “ performing the other parts of his duty. In  
 “ addition to the pain and humiliation which  
 “ this occasioned, he suffered much from  
 “ poverty, and a multiplicity of unfortunate  
 “ events, which occurred in his family and  
 “ household affairs. These circumstances  
 “ soon induced such anxiety, as often caused  
 “ him to pass many sleepless nights; and  
 “ which

“ which anxiety of mind, according to his  
“ own report, could not be dissipated but by  
“ the perusal of pious books. In reading  
“ the Bible, he was struck with the book of  
“ Daniel, and was so much pleased with it,  
“ that it became his favourite study; and  
“ from that time the idea of miracles so  
“ strongly possessed his imagination, that he  
“ began to believe that he himself could per-  
“ form some. He was persuaded, for in-  
“ stance, that his power was such, that if he  
“ were to plant an apple tree with a view of  
“ its becoming a cherry tree, it would bear  
“ cherries! He was discharged from the  
“ king’s service, and sent to the workhouse,  
“ where he conducted himself calmly, or-  
“ derly, and industriously, for two years,  
“ never doing any thing which betrayed in-  
“ sanity. It was then resolved to send him to  
“ his family, and Dr. PHEL, before dismissing  
“ him, examined him.

“ He answered every question properly,  
“ except when the subject concerned mira-  
“ cles; but in regard to these he retained his

“ old notions, adding, however, at the same  
“ time, that if he found, upon trial, after  
“ he was at home, that the event did not  
“ correspond with his expectation, he would  
“ readily relinquish the thought, and be-  
“ lieve he had been mistaken. One error  
“ of his mind he had already removed in this  
“ way; for there was an old woman whom  
“ he, at one time, considered as a witch, but  
“ whom he afterwards discovered upon trial  
“ to be no such thing.” His great desire was  
to be allowed to return home to his wife and  
family, which was granted him.

Enough has been said to point out what  
kind of ideas create grief; how grief and other  
varieties of mental pain, when long continued,  
disorder the functions of the body, and, also,  
how, by constantly preserving one chain of  
thought, they cause false judgments to arise;  
how these disorders of body and mind create  
the disease called melancholy, and, likewise,  
how this disorder may terminate in *tædium*  
*vitæ*, suicide, murder, mania, and mild deli-  
rium. It now remains to speak of melancholy  
as

as arising from a peculiar idiosyncrasy of the solids and fluids.

In those who, by the peculiar organization of their frame, are greatly disposed to this complaint, a number of diseased affections generally exhibit themselves before the age of thirty, or thirty-five. The most common symptoms are head-achs, frequent attacks of giddyness, sudden confusion of ideas, a great disposition to anger; violent agitations when irritated, and uncommon sensibility of nerves, whereby they are apt to be carried to as great excesses from causes of joy, as from causes of grief. But before these symptoms occur so frequently as to excite attention in the friends or by-standers, the disposition to melancholy may often be discerned by external signs, which are constant in certain individuals. These signs constitute the external character of what the ancients called the melancholic temperament, and are as follows: a lean and dry frame, the very reverse of the plump, succulent, and fleshy appearance of a person in good health, especially one of the sanguine

Q 2

tempera-

temperament; small and rigid muscles, the interstices between which are not filled up with fat, a fallow skin, and complexion which is frequently of a brownish yellow colour, with little or no admixture of red, deep black stiff hair, eyes sunk, hollow sockets, large veins, especially in the hands and arms, and a constant expression of dejection. Such are the characters of the melancholic temperament which are mentioned by the ancients, and copied by all succeeding writers. It is, however, to be observed, that these signs do not always appear in early life, even where there is a strong tendency to melancholic insanity. They are rather to be considered as the effects of the disease, after it has continued for some years. Of many melancholic patients who have fallen under my care, both as out-patients of the Westminster Infirmary, and in private practice, several have had the remains of the external characters of the sanguine temperament, that is, they have had fair, or reddish hair, a fair but rather pale complexion, blue eyes, and fine skin.

After the age of thirty, sometimes much earlier in life, if they have been born of melancholic parents, these people begin to have indescribable sensations of anxiety, and internal uneasiness, of which they can give no good account, but which have so powerful an effect on them as to make them withdraw themselves from society, and abandon themselves to tears, and other affections of grief. I have known this happen to young men of my acquaintance, who were not more than 19 years of age. They are always subject to impressions of fear; and many imaginary objects of terror and distress are constantly present to their mind. Some are seized with an affection of phrenzy in early life; others continue free from it until considerably advanced; and others are never affected with any furious delirium, but pass their days in constant despondency.

In those who are constitutionally inclined to melancholy, and who have had frequent attacks of it, for it often subsides, and returns again, much disorder at last takes place in  
2 various



various functions of the body. These are similar to the disorders which are occasioned in almost every person by long-continued grief, such as a depraved appetite, being either much impaired, or almost totally abolished while melancholy prevails, and a keen and ravenous appetite, when it is absent. They are troubled with flatulency, with acute pains in the hypochondriac regions, with hæmorrhoids, and irregularities in the alvine discharge. These bodily affections, however, are not to be met with in every case of melancholia, for many shall have all the mental characters of the complaint for several years, and yet have no remarkable disorder in the corporeal part of their system. The functions of the liver are those which are most commonly changed, for the bile is seldom found to have its natural qualities in those who have long laboured under this disorder. It is often vomited of a deep green colour, and acrid quality; and before it is evacuated in this way, it occasions head-ach, flushings of heat in the face, and a sense of burning heat in the hands, accompanied with a metallic taste  
in

in the mouth, resembling that which a piece of brass or copper imparts to the palate. In some others the bile produces disorders in the intestines, and gives a kind of pitchy consistence to the stools, as has been already taken notice of; but these phenomena are by no means constant or necessary attendants of melancholy. The general mental character of the complaint, when it arises from strong hereditary predisposition, is this: frequent feelings of anxiety, grief, and despondency, a desire of doing well, but an incapability of steadily pursuing any laudable exertions, on account of painful internal sensations, and involuntary acts of judgment, founded on false or erroneous thoughts, which, however, command a firm conviction in their mind; they have, also, a strong desire of relief, and symptoms of despair, or *tædium vitæ*, in consequence of finding that no relief can be obtained from the constant misery under which they labour. It is surely needless to add, that in the delirium of despair they may commit any of the rash acts which attend this state. A single case will put this in a clearer point

point of view than can be described in general terms. “ D. SEYBELL was admitted into  
“ the Orphan Hospital, at Potsdam, when he  
“ was four years old, and remained there  
“ until he was twenty. He was brought up  
“ by trade to be a shoemaker, and was, according to the testimony of all who knew  
“ him, a quiet, industrious, and pious man;  
“ rather simple, and timorous, and more inclined to grief than to joy. Even in his  
“ early years he frequently fell into a state of  
“ melancholy, in which he behaved himself  
“ strangely, and hence he obtained, among his  
“ companions, the nickname of the mad Seybell. He was exceedingly plethoric, and  
“ subject to sudden ebullitions and determinations of the blood to the head, which were  
“ always accompanied with great restlessness  
“ and anxiety, and which were augmented or  
“ diminished according as the commotion in  
“ the sanguiferous system was increased or  
“ lessened. In his later years this disorder  
“ terminated in true melancholy.

“ He

“ He had not learnt his profession sufficiently well to support himself by it, and he was not fortunate enough to please the various masters into whose service he went; hence his mind was filled with displeasure on account of his own inferiority and want of talents; and a constant dread preyed on his spirits, lest he should be turned out of all employment, and be rendered destitute. Under this apprehension, he one day suddenly, and without any cause being given, left the house of a Mr. Counsellor OESSFELD, of Potsdam; in the service of Captain VON WINTERFIELD, he attempted to shoot himself; and, while with Mr. WISSMAN, he threw himself out of a three pair of stairs window.

“ From December, 1772, to January, 1781, he lived in a state of great poverty, supporting himself by sewing, the profits of which were hardly sufficient to supply his most urgent wants. He had also a few debts, which he was anxious to discharge, but being without the means of doing so, he  
“ could

“ could not gratify this wish. Tortured by  
“ constant anxiety and distress, which he en-  
“ deavoured in vain to alleviate by prayer;  
“ tormented by the foresight of spending an  
“ unhappy and miserable existence; fearful  
“ lest he should be arrested on account of his  
“ debts, which were really inconsiderable,  
“ and prepossessed with the idea that his af-  
“ flictions would not be terminated but by his  
“ death, the unlucky thought sprung up in  
“ his mind of accelerating that wished-for  
“ event by murdering a child. The child  
“ whom he selected, as the instrument by  
“ which he was to attain heaven, he loved to  
“ excess, as he himself avowed, and as its pa-  
“ rents testified, who said that he had taught  
“ the child many prayers, and several passages  
“ of the Bible.

“ The strong love which he entertained for  
“ this little object of his regard, was once the  
“ cause of its life being saved, when he had  
“ previously determined in his mind to take it  
“ away; but one day afterwards being suddenly  
“ seized with a furious delirium, he quickly  
“ murdered

“ murdered it. He tried to conceal the body,  
“ and yet the moment after, he went out of  
“ the house and told what he had done.”

That a certain peculiarity of disordered constitution, which, by constantly yielding a number of diseased and painful sensations, predisposes to melancholy, may be accidentally created, as well as born with a person, is a fact founded on daily experience. Many professions give birth to it, and it also often arises from the injuries which a dissolute life, and various excesses in diet and drink occasion; shoemakers, who not only live a sedentary life, but sit constantly bent, and sustaining an injurious pressure on the stomach, tailors, bakers, and glass-blowers, who are exhausted by intense heat, severe work, and hard drinking, and men of letters, who neglect all exercise, and live too much retired, are the most frequently exposed to occasional symptoms of this dreadful malady; but even in these men whose health is much deranged, true melancholy seldom arises, except mental causes of grief and distress join themselves to  
the

the corporeal ones, and this constitutes one of the characters which distinguishes *Melancholia vera* from *Hypochondriasis*. The former may be said to be always excited by mental causes, and consists in various phenomena of grief, despondency, and despair; whereas the latter most commonly arises from corporeal causes, and its mental phenomena consist of erroneous ideas entertained about their own make or body. These two diseases are, indeed, often united in the same subject, and then the mental character is seldom constant; for, at times, the strange illusions of hypochondriasis prevail, and at other times the despondency and despair of melancholy. Melancholic patients seldom live long. They often terminate their own existence in the attacks of the disorder; but even when carefully watched, and every care is taken of them, they never attain old age. Many die before thirty or forty, and few live beyond sixty; but a great deal of diversity in this respect arises from the difference of the time of life when they are first seized with the complaint. See

GRETING'S Aphorisms, at the end of this work.

It has been already explained how repeated causes of mental pain shall, at times, give birth to the predisposition to melancholy, and if frequently renewed, shall at last induce it. These causes, although very numerous, may all be reduced under a few general heads, or classes; and, accordingly, as the disease originates from one or other of these, it may receive its denomination from that source. It is upon this principle that SAUVAGES and his copyers make so many different kinds of melancholy.

In order to render the history of this humiliating and painful disease tolerably complete, it will be necessary to make a few observations on the various species of melancholy which are described by SAUVAGES.

The first which is mentioned by SAUVAGES, he denominates *Melancholia Vulgaris*, or common melancholy (Nosol. Method. Tom. 2.



p. 251. edit. Amstel. 1768.) He does not give any general character of it, but relates a number of cases which he thinks are to be referred to it; though the greater number of these, in my opinion, ought to be classed under the head of Hypochondriasis. The first case is that of a physician, who, after he was cured of a fever, imagined that he was poisoned by the apothecary. This case is too briefly related to authorize any very decided opinion concerning it. It may have been a case of real mania, such as now and then occurs after fevers, especially where there is much predisposition to the complaint, or it may have been a case of melancholy. The next is that of a rich man, who imagined himself reduced to the greatest poverty, and would not stir out of bed for fear of wearing out his clothes: in every other respect he was a reasonable man. This is, doubtless, a case of real melancholy. Almost all the other cases which are mentioned by SAUVAGES, as instances of the melancholia vulgaris, are evidently cases of hypochondriasis; such, for instance, is that of the man who believed himself

self a dunghill cock, and occupied himself in crowing, and imitating the noise which that animal makes when it flaps its wings; such, also, is the case of the man who believed his legs to be made of straw; and of him who being afraid lest Atlas might grow tired of supporting the world, imagined he would throw it upon him; and, lastly, all those of whom SAUVAGES speaks, who imagined that their heads were made of glass, and those who fancied they were wholly composed of ice, all of which cases he describes as common melancholy, are in fact so many instances of true hypochondriasis.

The second species of melancholy mentioned by this celebrated writer, is the *Melancholia Amatoria*, or *Erotomania*. Sentimental love, undoubtedly, when in a certain degree, may justly be considered as a species of melancholy. The description of this disease will fall under our observation in the chapter on Love.

The third is the *Melancholia Religiosa* of our countryman CHEYNE, the origin and history of which has been described.

The fourth species of SAUVAGES, is the *Melancholia Argantis*, or *Maladie Imaginaire* of the French; as for instance, when a man believes, without any reasonable cause, that he is affected with the venereal disease, or with the itch, and is miserable in consequence of such a thought. Dr. DARWIN makes three distinct kinds of this species of melancholy; 1. Syphilis imaginaria; 2. Pfora imaginaria; 3. Tabes imaginaria. To me, however, it appears to be much more agreeable to the principles of Nosology to class these imaginary diseases with hypochondriasis; for, in fact, they almost all proceed from diseased corporeal feelings, of a very obscure kind; and hence the extreme difficulty of removing them. It is not more extraordinary that a man should imagine his body to be covered with the itch, or that he is syphilitic, consumptive, or impotent, than that his legs are made of straw, or his head of glass; nor do I think that there

is any real difference in the nature of these diseases, for I have endeavoured to prove that the notion which is present in the mind of hypochondriacs, and which appears to the bystander to be the cause of their misery, is always accidentally excited, and if it be removed by stratagem, some other idea, totally different, but quite as erroneous, may take its place. See chapter on Hypochondriasis.

The *Melancholia Moria*, which is the 5th species of SAUVAGES, is an hallucination of a peculiar kind, which has been already taken notice of. SAUVAGES illustrates it by the following celebrated case :

---

Fuit humo ignobilis Argis,  
 Qui si credebat miros audire tragædos,  
 In vacuo lætus fessor, plauforque theatro,  
 Hic ubi cognatorum opibus, curisque reſectus,  
 Expulit helleboro morbum, bilemque meraco:  
 Et redit ad ſeſe : pol me occidiſtis amici,  
 Non ſervaviſtes, ait, cui ſic extorta voluptas,  
 Et demptus per vim mentis gratiſſimus error:

This delirium, or rather hallucination, is the effect of a disproportionate activity in the

representative faculty of the mind, and cannot with strict propriety be classed with melancholy, inasmuch as the illusive ideas are often sources of pleasure to the patient. Some people are born with a strong predisposition to this disease; others have it gradually brought on by a fondness for such studies as give too much employment to the faculty of fiction, or imagination. See chapter on Genius.

The 6th species of SAUVAGES is the *Melancholia Attonita*, which does not appear to differ from the more common kinds of melancholy, except in mere degree. SAUVAGES relates a case of it from his own knowledge; after which he gives the following description of the disorder. " In this species, the patient  
 " neither moves from place to place, nor changes his posture; if he be seated, he never rises up; if standing, he never sits; if lying, he never gets up. Neither does he move his feet except they be pushed aside by a bystander; he does not shun the presence of men; if asked a question he does not answer,

“ fwer, and yet he appears to underftand what  
 “ is faid; he does not yield to admonition,  
 “ nor does he pay any attention to objects of  
 “ fight or touch; he feems immerfed in  
 “ profound thought, and totally occupied  
 “ by foreign matters; at times he is more  
 “ awake: if food be put to his mouth he eats,  
 “ and if liquor be prefented he drinks. This  
 “ rare difeafe has never been feen by SENNER-  
 “ TUS, but JANUS, Phyfician to the ELECTOR of  
 “ SAXONY, once faw it in a man about thirty  
 “ years old, who was terrified with the thought  
 “ that the Deity had condemned him. This  
 “ man laboured under it during four months in  
 “ the autumn and winter, and at laft was gradu-  
 “ ally reftored to his right underftanding.” See  
 SAUVAG. Noſolog. Method. Tom. 2. edit.  
 Amfteld. 1763, p. 256.

The 7th ſpecies which SAUVAGES deſcribes,  
 is the *Melancholia Errabunda* of BELLINI and  
 MONTALTI. The patient, in this ſpecies of  
 melancholy, is ſaid to be in a ſtate of conſtant  
 motion, and at the ſame time totally abſorbed  
 in thought, ſo as to be perfectly unconſcious

where he is going, or what he is doing. He is said to be the most timorous of all melancholic patients; flying from the society of men, frequenting solitary and dismal places, such as sepulchres and church-yards. His body is described as being always emaciated and dry, his eyes sunk in hollow sockets, his tears dried up, his thirst excessive, his tongue parched, and his colour of a citron yellow. SAUVAGES, l. c. Tom. 2. p. 256.

If there be in reality such a kind of melancholy as this, which, however, is a circumstance that may be excusably doubted, since neither SAUVAGES himself, nor any author since his day, has pretended to have seen it; yet would not consider it as a distinct species, but solely as a variety, arising from the intensity of the melancholic thoughts.

The 8th species which SAUVAGES describes, he denominates *Melancholia Saltans*, a disease described by MEZERAY, in his history of CHARLES V. It was said to rage in HOLLAND, as an epidemic, in the year 1373. Those who  
were

were affected with it tore off their cloaths, and ran quite naked up and down the streets, through villages and in the churches, until at last, being entirely spent, they fell breathless on the ground. Many of them swelled until they burst, except they were bound in chains. The disease was often communicated to the spectators, and was supposed to originate from the patient's being possessed by evil spirits, and, accordingly, was cured by exorcisms!

Now, granting that there even was some foundation for such an exaggerated story as this, it is evident the disease has no claim to be classed with melancholy. It has not any one character of that disease. The history of many very singular kinds of spasmodic diseases, allied to the nature of Saint Vitus' Dance, are on record. The accounts which are given of these are often rendered remarkable by a fondness of the narrator for exciting wonder; and hence implicit faith is seldom to be given to all that is said concerning them. The *Melancholia Saltans* I conjecture to have been of this kind.

The



The next, or 9th species, described by SAUVAGES, is equally fabulous, in my opinion, as the last; the following is his account of it, which I give in his own words. He calls it *Melancholia Hippantropica*, and takes the relation from the edifying letters (lettres edifiantes) of a Jesuit called LE COMPTE.

“Sinensis quidam persuasus fuerat a sacerdotibus seu Bonzis, fore ut sua anima migratura esset post mortem in corpus veredi, jussa Imperatoris in Elifios compos translaturi; eum proinde hortabantur ad rectè currendum, abstinendum a morfu, calcitrationse, &c. Bonus ille senex turbulentos somnos vix capiebat, cum se ephippio instructum et fræno, jam ad veredarii flagrum profecturum credebat; ast expergefactus sudore diffuens, num equus esset an homo dubitabat. Conversus in Christianam religionem resipuit.”

The *Melancholia Scytharum* of HIPPOCRATES, which SAUVAGES enumerates as the 10th species, was a case of real melancholy from impotency of a particular kind,

The 11th species of SAUVAGES is the *Melancholia Anglica*, or *tedium vitæ*, which has been already fully described in this chapter.

The 12th species of the same author is the *Melancholia Zoanthropia*; but this *Melancholia Zoanthropia* is a case of mere hypochondriasis, and by no means a very unfrequent one.

The patient either imagines himself an animal, and imitates the manners of it, or else he thinks he has animals or monsters within him; and this is the principal feature of the complaint. RAULIN, in his *Maladies Vapoureuses*, mentions the case of a number of young nuns, all belonging to one convent, who thought that, at a particular time every day, they were turned into cats, and DONATUS is said, by SAUVAGES, to have been a witness of the following curious facts. “*Duos lycanthro-*  
“*pos se vidisse testatur Donatus ab Alto-*  
“*mari qui per avia vagabantur, cadavera*  
“*humana, aut partes eorum secum gestantes;*  
“*de cætero luridos, siccos, adustos, sitientes*  
“*cos depingit, ut locomoriam omnino refe-*  
“*rant.* SAUVAGES, l. c. Tom. 2. p. 259.

The

The 13th species of SAUVAGES is the *Melancholia Entusiastica* of PAULUS ÆGENITA. This is a mere variety of that singular hallucination described in the chapter on Genius. The following is the description and illustration of the complaint, as given by this distinguished Nosologist.

“*Melancholia Entusiastica* PAULI ÆGENITA.  
*Entusiasmus ÆGRI numine afflati. C.*

“Quidam verò etiam putant se ab aliquibus potestatibus majoribus impeti, et futura prædicere, velut numine afflati, quos etiam privatim *numine afflatos* nominat PAULUS ÆGENITA. PARACELSUS existimabat se in acinacis capulo suum azoth, sui genium suum gerere. Mulieres fatidicæ, quibus stipat errabant Gebennenses fanatici, se cœlitùs afflatas putabant, futura prædicere, abscondita cognoscere se jactitabant; has vero prophetias non prius edebant quàm epilepsiæ paroxysmum simulatum passæ forent; itaque humi prostratæ, mirum in modum se exagitabant et ad se reversæ futura prædicebant.” Tom. 2. p. 259.

Now

Now it is evident, from this description, that SAUVAGES mistakes some of the particular illusions which have been mentioned in the chapter on Genius, for Melancholy.

The 14th and last species of SAUVAGES is the *Melancholia Phrontis* of HIPPOCRATES.

This is by no means an uncommon variety of true melancholy; or rather, it is a common combination of melancholy and hypochondriasis, as is evident from the following description of the patient's health. "Viscera veluti spinarum aculeis pungi videntur, anxietudo ipsum invadit, lucem et homines refugit, tenebras amat, metus corripit, septum transversum exteriore parte intumescet, ad contactum dolet, expavescit, in somnis urriculamenta et formidanda cernit quandoque et mortuos: morbus hic interdum plurimos vereprehendit."

## CHAPTER IV.

## ON FEAR, ITS MODIFICATIONS AND EFFECTS,

*Fear cannot take place without foresight. In what the predisposition to fear consists. How it is increased by experience. The difference between apprehension, dread, and terror. Upon what principles the effects of fear are to be explained. The primary corporeal effects of fear described, and cases illustrative of these related. The primary corporeal effects of terror described. Upon what principle permanent diseases, or the secondary corporeal effects of fear and terror, are produced. Cases illustrative of the diseases. Why terror, which is a modification of fear, appears, at times, to act as a powerful stimulus. Fear peculiar to certain constitutions from mere organization. The timorous disposition described. Its effects on the mental faculties. How it predisposes to insanity. Cases illustrative of this*

*this position. The fear of poverty, of eternal damnation, and of death, common causes of insanity with people who are born of a timorous disposition. Fear may be associated with other passions. Its character in consequence of this.*

THE painful emotions of apprehension, fear, and dread are never excited in the human breast but through the medium of foresight; for, although they may arise from present calamities, as well as from past events, yet it is not the uneasiness which the calamity itself occasions that we call fear, but that which arises from what we think will follow.

The predisposing cause of fear is to be sought for in the general interest which we take in every thing that regards our own existence; like most of our passions, it may be considered as a modification of self-love: the number of our fears is increased by our experience, and by analogy; and, in this way, knowledge and reason become, at times, the

4

enemies

enemies of human happiness. The mere occupations of the present moment with difficulty command our whole attention; and, whilst engaged in the various pursuits of the day, our mind seems often to steal away from us, and hastening to the borders of futurity takes a rapid glimpse of events which are to happen. Happy for us if the prospect it discovers be cheerful and gay; for sanguine expectation and hope then arise, and these beget confidence, and confidence overcomes distress and resists the approach of fear. When, however, on the other hand, our knowledge of human affairs shews us that many of the present, or past, events of our life, are likely to be followed by calamitous consequences; when we see the thick and dark clouds of misfortune gathering fast around our head, hope and confidence vanish, and leave us to the torments of a passion, the effects of which I am now to describe. But first let it be observed, that although the words *apprehension*, *dread* and *terror*, are to be justly considered as expressions which denote a modification of fear, yet they imply

a con-

a considerable difference, not only as to the cause of such emotions, but also as to our own sensations.

Terror arises from the sudden and unexpected view of some great impending danger, as when an assassin attacks us, or when we are surprized by the appearance of a furious or ferocious animal; but apprehension is occasioned by an indistinct prospect of some distant and very uncertain evil. When the merchant, a great part of whose fortune is exposed to the joint dangers of the winds and the ocean, is awakened in the middle of the night with the loud roarings of a terrible tempest, *apprehension* instantly arises in his mind; and his imagination, by representing to him what may happen, shall cause apprehension to terminate in *dread*.

As every human event may be viewed from a number of different points, and the train of associated ideas is different according to whatever side we look from, we see the reason why some men shall regard with indifference certain  
objects



objects which occasion dread and terror in the breasts of others. An English sailor has been accustomed to consider a shark as a dangerous animal, from which he is safe only while in a different element; if he falls overboard, and is really pursued by one, he almost dies the premature death of fear before his enemy reaches him; but what does the savage in such a situation? he has been taught to consider the horrid animal as one which may be kept at bay by a dexterous attack, or which may be eluded by stratagem; and he acts accordingly, and often escapes from, or vanquishes the monster. How differently does the approach of death affect different people! The thoughts, which the association of ideas brings into the mind of some, when they look forward to this last and most awful event, fill them with a dread and horror which they are unable to paint in suitable language; while others, not only look calmly forward to the termination of their existence, but seem to anticipate it with a degree of inward satisfaction and pleasure.

The effects of fear are to be accounted for, partly on the principle of a certain powerful stimulus (hope) being withdrawn, partly by the specific action of the ideas representing the object or objects of aversion, and partly from the reaction of the bodily emotion and disorder on the mind.

The corporeal effects of fear must first be taken notice of. The force of every action of the human body, not only the voluntary, but also the involuntary ones, is wonderfully diminished by the sudden influence of this passion; the heart does not contract with sufficient energy to expel the whole of its contents, and the pulse therefore becomes small and quick; the action of the arteries corresponds with that of the heart, and hence there is a want of free circulation in the remote branches; this is evident from the chillness which is felt all over the body, from the paleness of the cheeks and lips, and the contraction of the skin.

As:

As the blood is naturally accumulated in the large vessels which are in the neighbourhood of the heart, a painful sense of fulness, oppression, and anxiety is felt there. Now, when once the irritability of the heart and arteries becomes redundant during the previous diminished action, which occurs on the first impression of fear, and the blood is accumulated in its neighbourhood, it at last excites a preternatural increase of action; and of this we have a clear proof in the frequent alternations of heat and cold, and in the irregularity of the pulse with which a person, who has been frightened, is affected.

The secreting and excretory arteries lose their contractile force, and hence a great flow of their contents is generally a consequence of fear. The sweat starts out in large drops on the forehead and face, and, upon the same principle, the person is often afflicted both with a diabetes and a diarrhœa. The urine which is voided by people who are under the impression of fear is generally pale coloured, and always small in quantity; but the desire  
of

of voiding it is extremely frequent. As fear diminishes muscular force, it must necessarily affect the sphincter of the bladder; in such a case, a very small quantity of water is sufficient to cause this muscle to yield a little, and it is this circumstance which produces the desire. Whether the diarrhœa may not depend, in a great degree, on a similar principle, is also doubtful; the fact itself is perfectly well authenticated, for many authors of respectability take notice of it. "It is well known," says UNZER, "that ARATUS, the Greek general, "was always seized with a purging previous "to the commencement of a battle, and it "never ceased until the engagement took "place." *Der Arzt*. B. 3. bl. 342.

BONETUS relates the case of a lady who was always seized with a vomiting and purging on the approach of a storm, and which continued during the whole time it lasted. PECHLIN, in the third book of his *Observations*, assures us, that a friend of his, a certain professor, TITIUS, was of such a timid disposition, that he was always afflicted with a tran-

fitory diarrhœa before he began a lecture; and the same author relates the case of a German prince, on whom any disagreeable tidings had a similar effect. One of the foreign ministers at his court, who would not believe that such an effect could be produced by fear, was, however, convinced of his error by a stratagem of the court fool. The prince was then at war, and one day, while the ambassador was at dinner with him, the fool came running in, with a countenance full of dismay, and asserted, that the enemy were approaching the residence. The effect which the alarm occasioned in the bowels of the prince soon became very evident to the minister. PECHLIN, *Observ.* xviii. lib. iii.

A much more remarkable corporeal effect, both of fear and terror, and one which is perfectly well authenticated, is the effect it produces on the hair of the head, changing it very suddenly to a grey colour. BORELLI relates the case of a French gentleman, who was thrown into prison, and on whom fear operated so powerfully, as to change his hair completely  
grey

grey in the course of the night. Soon after he was released, his hair regained its former colour. CENT. i. *Obs.* 37. Many other cases of this kind are mentioned by DONATUS and SCALIGER. This phenomenon is ascribed by Dr. DARWIN to the torpor of the small vessels which circulate the fluids destined to nourish the hair, just as the cataract is owing to the torpor of the vessels which supply the chrySTALLINE lens with fluids. It is evident, from this circumstance, that many other causes of debility, besides fear, may produce it; thus it frequently takes place in men who have lived a life of excess; it also occurs, now and then, in consequence of fevers, and always in consequence of the debility of old age.

The corporeal effects of terror greatly resemble those of fear, for terror is nothing else than great and sudden fear: greatness in degree, and suddenness as to the impression, are essential circumstances in its production.

When a person is suddenly terrified, the motion of the heart is generally quickened; a kind of spasmodic contraction seizes all the arteries, especially the extreme ones, causing an accumulation of blood in the larger vessels. The sudden and forcible distention of the heart makes it move on its basis, and produces that peculiar sensation which most people endeavour to express by saying that their heart seems to jump to their throat. A kind of spasm seems to seize the muscles about the glottis, for respiration is always suddenly interrupted, but this is of very short duration. A death-like paleness overspreads the countenance, the features shrink, the legs and whole body are thrown into a state of tremor, and the arms hang motionless. In some cases, the debility which is produced is so great, as to render it impossible for the person to support himself in an erect posture, and he, therefore, falls down, apparently senseless and speechless, on the ground. In this way the strongest man is often deprived, in a few seconds, of almost the whole of his natural strength.

These

These primary effects of fear and terror often become the immediate causes of many serious diseases.

Fear and terror, like most of the painful passions, may produce diseases upon one of the three following principles:

1st. By the violence of the sensorial impressions, which, upon being transmitted to the nerves, acts like powerful stimuli to the muscles.

2dly. By promoting an unnatural determination of blood to certain parts of the body, rather than to others.

3dly. By exhausting the sentient principle, and producing a state of great debility.

1st. Violent sensorial impressions may act like tumors in the brain, or splinters of the skull, or extravasations of blood, and produce diseases upon a similar principle; but, as the sensorial impressions are seldom causes of permanent



manent pressure, like the former, but act by frequently recurring, or by repetitions, we see the reason why they generally produce spasmodic diseases. The most common morbid effects of the impressions of fear or terror, therefore, are convulsions, epilepsy, and, now and then, that very rare disease called catalepsy.

*Convulsions.* PLATER relates the following case, in his *Obs.* lib. i. p. 36. “Some young  
“ girls went, one day, a little way out of  
“ town, to see a person who had been ex-  
“ ecuted, and who was hung in chains.  
“ One of them threw several stones at the  
“ gibbet, and, at last, struck the body with  
“ such violence as to make it move; at  
“ which the girl was so much terrified, that  
“ she imagined the dead person was alive,  
“ came down from the gibbet, and ran after  
“ her. She hastened home, and not being  
“ able to conquer the idea, fell into strong  
“ convulsions, and died.

*Epilepsy.*

*Epilepsy.* Of fear and terror producing this disorder, many instances are on record. SCHENKIUS in his *Observ. Medic.* lib. i. p. 128. relates, with much apparent grief, the case of his own wife, as a melancholy instance of the fatal effects of this passion. She was of a healthy and robust constitution, and was in the last month of her pregnancy, when, unfortunately, a fire broke out in the neighbouring house. The flames which she saw from the window, and which appeared to be in the upper part of the house she inhabited, together with the many vivid sparks of burning materials which floated in the atmosphere, and which were flying in every direction, caused her to conceive such extreme terror, that she was seized with severe epilepsy, which returning frequently, occasioned her death in twelve hours. VAN SWIETEN, in the third volume of his Commentaries on BOERHAAVE'S Aphorisms, p. 415, relates a case which demonstrates, in a very remarkable degree, the effect of the sensorial impressions of terror. A boy was so much frightened by a dog leaping on him, that he was seized with epilepsy;

epilepsy; and when, at any time afterwards, he saw a large dog, or heard one barking, the paroxysm always returned.

*Catalepsy.* “GEORGE GROKATZKI, a Polish  
“soldier, deserted from his regiment in the  
“harvest of the year 1677. He was disco-  
“vered, a few days afterwards, drinking and  
“making merry in a common alehouse. The  
“moment he was apprehended, he was so  
“much terrified, that he gave a loud shriek,  
“and immediately was deprived of the power  
“of speech. When brought to a court mar-  
“tial, it was impossible to make him articu-  
“late a word; nay, he then became as im-  
“moveable as a statue, and appeared not to  
“be conscious of any thing which was going  
“forward. In the prison to which he was  
“conducted he neither ate nor drank; neither  
“did he make any water, nor go to stool.  
“The officers and the priests at first threaten-  
“ed him, and afterwards endeavoured to  
“sooth and calm him; but all their efforts  
“were in vain. He remained senseless and  
“immoveable. His irons were struck off,  
“and

“ and he was taken out of the prison, but he  
 “ did not move. Twenty days and nights  
 “ were passed in this way, during which he  
 “ took no kind of nourishment, nor had any  
 “ natural evacuation; he then gradually sunk  
 “ and died.” BONETUS, *Medic. Septentrion.*  
 lib. i. sect. xvi. cap. 6.

2dly. The diseases which arise from the preternatural determination of blood to certain parts of the body, are various. The cases, which prove this assertion to be true, are so numerous, and so little interesting in point of novelty, that I deem it unnecessary to introduce particular relations of them: a simple catalogue of them, and the authorities, will be quite sufficient.

a. Hæmorrhages of various kinds, especially Hæmoptoe and Menorrhagia, of which HILDANUS, in his *Cent. i. Obs. 18.* and TRALLES, in his *Vorsorge der Mütter*, p. 311. and SCHELHAMMER, in his *Opera*, tom. iii. par. cccii. relate several cases.

b. *Apoplexy.*

b. *Apeplexy*. See BECKER *Cultrovor*. WEIR, *de Ira*, p. 795.

c. Sudden suppression of the Menfes. BAGLIVI, p. 537.

d. Sudden suppression of the Milk. MORTON, LA MOTTE, and RIVIN de Peste.

e. "*Vires ad venerem necessarias frangit.*" HALLERI *Phys.* tom. i. p. 534. *Lausannæ*, 4to. 1769. Of this effect of fear many very curious cases are related by MONTAGNE, in his *Essays*.

f. *Palsy*. MORCELL DONATUS, p. 640.

3dly. Fear and terror exhaust the sentient power and irritability so completely as, in some cases, to occasion great chronic weakness, intermittent fevers, and even death itself; of which effects various cases are mentioned by PECHLIN, VAN SWIETEN, MARCUS DONATUS, *De Med. Hist. Mirab.* p. 285. RHODES, *Observ. Medicinæ, Ant.* 1. Obs. 45. and

and many others. There is one case mentioned by PECHLIN, which is very curious from the object which impressed the terror. A lady of quality, he says, who, in the year 1681, had several times seen, without alarm, the wonderful comet which then appeared, was one night tempted to examine it by means of a telescope; the sight of it, however, in this way, terrified her so much, that she was, with difficulty, carried safely home, and the impression remaining, she died in a few days afterwards. Lib. iii. Obs. 23.

This is the proper place to remark, that terror has been considered, by many authors, as a distinct passion from fear. They rank fear among the depressing passions, and terror among those which excite the animal system to a preternatural degree of force and action. There is no doubt that many cases seem to prove the fact, that people, when suddenly terrified, make exertions, and execute actions, which seem much above their natural strength. 8

In regard to this observation, I would remark, that if the word fear be solely applied to the painful foresight of some distant evil, no proof can possibly arise of its being essentially different, in its primary effects, from terror. On the other hand, every thing seems to announce a very great similitude of action in both; the action of the heart and arteries is first greatly and irregularly excited in each of them, and then a prostration of strength and altered state of feeling follow. In terror, however, the will is generally excited, because the danger is immediately present, and the desire of self-preservation is powerfully roused; but, as in fear the danger is at a distance, there are no ideas which excite volition, and the muscles of voluntary action remain passive, and partake of the general torpor of the body. If there be no room for hope when a person is terrified, terror then acts like the most powerful fear, because there are then no ideas which can excite volition; no exertion of strength is observed; on the contrary, the person often falls down speechless, or dies, or experiences some lingering illness.

There

There is a certain state of the brain and nerves, which, inasmuch as it lays the foundation for a constant series of painful sensations, often predisposes, in a singular manner, to the impressions of fear, and may be said to constitute the peculiar diathesis of the timorous disposition. It is always connected with general debility of body, and it possibly consists in a want of nourishment in the nerves, or, in other words, in a deficient secretion of medullary nervous matter; and also in a scanty secretion of the fine fluid which is the medium through which all nervous impressions are conveyed.

Every person, who is endowed with a spirit of observation, must have remarked, that certain individuals, when compared with others, are extremely disposed to be frightened by very slight causes. Some people are timorous from the moment of their birth, and continue to be so throughout the whole of their lives; others are rendered so by disease and various accidental causes, as well corporeal as mental.



In both cases want of strength and energy are to be observed, and whatever increases the debility of the person augments the timorousness of his disposition. The medullary matter of the nerves not being secreted in due abundance, these organs are deficient in that degree of solidity which is necessary to modify all impressions received by them, so that they generally produce a powerful effect on the various irritable parts of the human frame to which they are transmitted, making the muscles contract as if they were convulsed. Such people are frightened at their own shadow.

When this peculiarity of constitution arises from accidental causes, as from hysteria, long attacks of dyspepsia, and certain other chronic diseases, it is generally capable of being either perfectly cured, or at least very much rectified, by means of strengthening remedies judiciously exhibited, together with a bracing good air, exercise and society. But when it is born with a person, it may be considered as one of the most serious evils which affects the happiness and tranquillity of human existence.

It

It may certainly be corrected, to a great degree, by a continued and patient employment of such things as strengthen both mind and body, that is, by properly exercising these two parts of our system, by avoiding everything which can produce disturbances in them, and gradually accustoming the person to such causes of alarm as he must inevitably meet with in the course of his life. It unfortunately happens, however, that there are but few parents, and still fewer teachers, who are capable of conducting such a mode of education, or who, indeed, have time for it.

The effect which such a peculiarity of frame has on the mind of the person is too striking to escape the observation of most people. Every object which is not familiar to the young person occasions apprehension, fear, or dread; the tamest, the most harmless and most common of all animals, or the first approach of a stranger, frighten them excessively. When they grow up this disposition generally increases, and often augments to such a degree as to lay a ready foundation for delirium.

GREDDING, in his excellent essay on the virtues and use of the Veratrum Album, relates several cases of epilepsy, complicated with insanity and with melancholy, which arose from slight causes of fear. " I. C. V: a young  
" man, 23 years of age, was, in his eighth  
" year, suddenly frightened by a dog; the  
" impression recurred often, and used to  
" awaken him in the night, being then always  
" tormented with the idea of his being at-  
" tacked by the animal. He was at first  
" seized with epilepsy, the paroxysms of  
" which occurred every half year, but which,  
" after some time, returned every month.  
" He was also afflicted with borborygmi, want  
" of appetite, and violent head-ach which  
" disturbed his rest; weakness of understand-  
" ing and real delirium ensued, and conti-  
" nued for several days together, which symp-  
" toms, after they had continued three years,  
" were followed by vertigo."

If those who are of a very timorous disposition, no matter whether it be born with them or accidentally formed, have their minds  
filled

filled with many of the strange and horrid notions which are common among ignorant people, they may be considered as always bordering on a state of insanity or epilepsy from mental causes; for accidental circumstances may give rise to such imaginary objects of terror as totally to destroy judgment. “I. C. B. a miner, aged 34, of a short stature, having a great round head, and being of a muscular fleshy make, was brought into our work-house, on the 5th of February, 1770, on account of an obstinate melancholy, which had commenced in the autumn of the year 1769, in consequence of terror from an imaginary cause. When he was asked concerning it, he gave the following account of himself; he said that, until the last autumn, he had always enjoyed good health; but one day during that season, as he was entering the smelting-house alone, a horrid, big, black human figure suddenly jumped on his shoulders, which terrified him so much as to occasion his present disorder.”

GREDDING, l. i. p. 35.

It is easily to be imagined, that the powers of reason are naturally weakened by habitual fear; for, as in every operation of judgment the attention must be confined, for a certain time, to the various ideas to be compared and from which the conclusions are to be drawn, and as the impressions of fear produce powerful uneasy feelings in our bodily frame, and as all powerful corporeal feelings generally withdraw attention from objects of cool reason, so an habitual weakness of understanding, or incorrectness of judgment is at last the result.

But when the operations of judgment are thus influenced, by the recurrence of dreadful thoughts, as much mental derangement may follow as if real causes of fear had operated. It is in this way that many rich people become insane from the mere apprehensions of poverty. The instability of human affairs, and the consequent precariousness of fortune, and an injudicious anxiety about the mere expenditure of property, are among the first mental causes which give birth to the frequent returns of this kind of dread. It often arises, also, in  
men

men who have been engaged in an active and lucrative business, and who injudiciously retire from it; for such people, from the nature of their education, having but few resources within themselves, continue to be much occupied about their worldly affairs; and as the constant spending of money is to them the source of many painful thoughts, and, also, as they are deprived of the pleasure they formerly received from the profits of their profession, so this kind of melancholy dread, or apprehension, is very apt to arise in their minds.

A person of a very timorous disposition is almost incessantly exposed to many unavoidable causes of pain; solitude, the darkness of the night, a long journey which must be executed, the common rivalry and enmity of mankind, the causes of anxiety peculiar to the various pursuits of life, are all rich sources of constant apprehension, and hence such people are very apt, at a certain period of their lives, to sink into a state of settled melancholy. It is surely needless to observe, that if any real and pressing calamity threatens them, from

T 2

which

which they think they cannot escape, despair naturally follows ; from which suicide or murder may result, accordingly as circumstances shall determine ; as an elucidation of which position, the case of CATHARINE HAUSLERIN, narrated in the preceding chapter, may be consulted.

The fear of eternal damnation, also, or religious despondency, and the fear of death, are to be enumerated among the varieties of the passion we are speaking of, which give birth to such melancholy and delirium as terminate in despair. The first is extremely common among the lower class of Methodists in this country, and among the Moravians in Germany. Such persons are awful lessons of the imbecillity of human reason ; they fall victims to the dreadful oratory either of enthusiastic preachers, or else of hypocritical ones.

When fear is mixt with other passions, these, as might be naturally expected, produce peculiar effects. Fear and wonder are common associations ; the gloomy and awful appearance

ance of the sky before the bursting of a thunder storm, the looking down from a high precipice, the sight of a stupendous cataract, or the conflagration of a city, are circumstances which produce on our minds the united effects of fear and wonder. The countenance betrays the mixt effect by the staring of the eye, the open mouth, the paleness of the skin and a cold and creeping sensation which overspreads it, and by the relaxation of the features of the face.

On the mind the united effects of fear and wonder are a total want of command over the flow of our ideas; and hence one of the most common consequences of such impressions is vertigo.

Fear is said to be often associated with hope. The truth, however, would be better expressed by saying, that they often follow each other in rapid succession; for, strictly speaking, fear is a negative of hope. When hope and fear are concatenated, so as to succeed each other quickly, they generally produce much agitation



tion in our frame, especially if they be powerful; for the impressions of the one are painful, and those of the other pleasurable; and the succession of such opposite effects tends to produce different actions in the heart and arteries, and yet neither of these is permanent; the whole body is thrown into a state of tremor and general agitation, flushings of heat and cold rapidly succeed each other, the breathing is at one moment quick and full, and the next moment languid and oppressed; and this state continues until either the hope or fear becomes predominant, and the symptoms then take the character from the prevailing passion.

Fear may be combined or concatenated with other affections of the mind; but although these are interesting in a psychological point of view, yet they are very little so in a medical one, and hence they have no title to a place in this work.

## CHAPTER V.

ON ANGER AND THE OFFENSIVE PASSIONS, AND  
THEIR EFFECTS.

*Anger a modification of the instinct of self-preservation. Of what it is composed. Men do not commit injuries for the pleasure of enjoying the misfortune of others, as asserted by HELVETIUS. By what circumstances a man is roused to anger. Difference between anger and resentment. Digression concerning the effects of anger, hatred, and revenge in society. Effects of anger on the individual. Corporeal effects described. Analogy of anger to delirium. The diseases enumerated to which this passion gives birth. Anger does not produce insanity; but the predisposition to mania strongly disposes to this passion.*

ANGER is one of the most powerful means with which nature has endowed us for resisting injury. It may be considered as a modification

cation of the instinct of self-preservation which all animals have in common with man. It arises from our aversion to pain. We are impelled by it, as if by an involuntary force, to acts of the greatest violence; and in order to enable us to perform them, are made to feel as if we were suddenly endowed with a preternatural degree of strength; every muscle of voluntary action is thrown into a state of half contraction, and the irritation is felt at the most distant parts of our extremities.

Every age, sex, and temperament experience the force of this destructive passion; the child and the aged person, the strong and the infirm, the phlegmatic and melancholic, the philosopher as well as the peasant; the smallest insect returns injury for injury; the bee stings when irritated, and the viper bites whatever gives it pain.

Like every other passion, it is composed of a certain series of mental perceptions, and of certain desires which spring from these. The  
objects

objects which give birth to the mental perceptions are such, as either immediately affect us with pain, corporeal or mental, or which we foresee will affect us with pain if not avoided; the desire is that of weakening, removing, or destroying the object which threatens us with such injury.

If the principle of fellow-feeling or sympathy tends to make us kind, benevolent, compassionate and charitable; the principle of self-preservation and its worst kind of modification, selfishness, by making us desirous of attaining every object which can promote our own happiness, often occasions us to be unjust, passionate, revengeful and oppressive.

Let it not be imagined, that what HELVETIUS has said can be generally true; that there are men who do injury to their fellow creatures from no other motive than that of enjoying the misfortunes of others. “ Il est des hommes malheureusement nés, qui, ennemis du bonheur d'autrui, desirent les grandes places, non

“ non pour jouir des avantages qu’elles pro-  
 “ curent, mais pour gouter le seul plaisir des  
 “ infortunés, pour tourmenter les hommes, et  
 “ jouir de leur malheurs.” Disc. iii. chap.

12. However unreasonable and wanton the actions of such men may appear to some people, it is certain that they arise from the same principle which prompts other men to award injury; they consider, (falsely indeed) that the acts of violence which they commit are necessary to secure their happiness, welfare, or self-preservation; and being, from a faulty organization of nerves, more powerfully actuated by these motives than what the generality of other men are, they do not examine with sufficient caution the various ties which bind them to society; and which when violated are more likely to defeat than promote the great object they have in view; their power of judging is weak, and they therefore easily yield to the first suggestions of the painful principle which governs them; a timorous man, who has either real or imaginary enemies, and who has power in his hands, will always act in a tyrannical, cruel,  
 and

and unjust manner towards them, because he is constantly under the impression of their doing him harm, or of their opposing his wishes. If he can remove them by any means consistent with his own safety, he will do so; the painful impressions of the present moment do not permit him to look forward to future consequences, and he therefore generally defeats his own purposes by his extreme violence; a brave man, on the other hand, feels a confidence in his own power, and often totally disregards men whom he knows to be his enemies, because he thinks he can at any time overcome them.

In order to prove, satisfactorily, that no man is roused to an offensive state of passion, but by circumstances which either evidently affect his welfare, or preservation, or which seem to him to do so, a slight analysis of the nature of the principal exciting causes of anger, hatred, and revenge, will be sufficient.

The most common cause of anger is when a man receives a real injury, or supposes he  
has

has received one; for the pain he suffers, whether bodily, or mental, makes him feel the most lively desire of removing the cause of it. The emotions which he feels about the præcordia in consequence of such pain, and the desire which is the consequence of this feeling, are the principal sources of the most tormenting uneasiness, and are the same in every person, if we except a difference in degree. The acts of volition which arise from the desire are modified by the intervention of various associated ideas, which give a very different character to the different acts, and they therefore receive different names. If a person, at the time of his receiving an injury, yields to the desire of removing the cause of it, and returns pain for pain, but that solely with the view of making the other person desist, by causing him to experience the same uneasiness which he has occasioned, this is considered, by the laws of his country, and by men at large, as reasonable, and, in many cases, commendable anger. But if, after a person has desisted from injuring us, we cherish the recollection of it, and consider him as an object of aversion, and if that aver-

sion

sion prompts us to injure him at any favourable opportunity, this is called resentment, and revenge; and we are properly said to be actuated by a vindictive spirit.

Resentment and a spirit of vengeance operate differently according as they are, or are not combined with other desires. If the vindictive person wishes to make another on whom he means to take revenge, feel his power, he finds a pleasure in the thought of making his enemy know that the vengeance proceeds from him.

---

“ Ma vengeance est perdue  
 “ S’il ignore en mourant, que c’est moi, qui le tue.”

If the vindictive person is endowed with true courage, he attacks his enemy openly, and by putting him on his guard, gives him a chance of his life: if on the other hand, personal fear operates strongly on him, and he wishes at the same time to be secure of the vengeance he means to take, he seizes an opportunity



portunity of executing his purpose when his enemy thinks himself safe from harm.

To attempt a complete enumeration of all the various causes which occasion hatred, anger, and revenge, would be a vain endeavour, not only on account of their multiplicity, and the various shades of difference which exist among them, but also on account of the great diversity that we observe them produce on different men: in some, a very slight cause seems to produce great turbulence of spirits, and ebullition of blood; in others, the disorders of the body and mind never rise to any alarming degree; in some they continue long after the exciting causes have been withdrawn; in others they gradually subside, like the agitation of the waters, after the storm has ceased to blow.

Among savage and uncultivated nations, the most common exciting causes of anger, hatred, and revenge, are the animal desires, and the remembrance of past injuries; among civilized nations they are more numerous; for in addition to these may be enumerated  
avarice,

avarice, pride, bigotry, superstition, love, friendship, the desire of conquest, and the desire of fame. From these sources spring acts of heroism, and bravery, secret vengeance, murders, cruelty, and oppression, according as accidental and incidental circumstances shall determine. Of all these causes, those which have been the most pernicious to the human race, bigotry, ambition, avarice, and the desire of conquest, are the most prominent ; for these have terminated, and may again terminate in the destruction of thousands of our fellow creatures, in the massacre of whole sects, in rebellion and civil wars, in the extermination of an inoffensive and generous people, and in the unjust subjugation of independent states, kingdoms, and empires. The slaughter of the Hugonots in the time of CHARLES IX. of France, and of the Protestants in England, under the reign of MARY ; the bloody hatred and enmity of the adherents of the houses of York and Lancaster ; the cruel conquests of the Spaniards in South America, in which the love of gold seemed to have given a metallic hardness to the human heart,

heart, are so many instances in support of the observation. To the repeated operation of such causes, also, we are to ascribe the horrid characters and dispositions of a CALIGULA, a RICHARD III. PHILIP the Cruel, a Duke of Alva, &c. As a medical writer, I find myself obliged to quit this field of inquiry, and return to the effects of this passion on the individual. These are either corporeal, or mental; but before speaking of them, it becomes necessary to remark, that anger must be divided, as to its effects, into two classes. The character of each may be taken from the external phenomena; in the one case, the face glows with heat, and is flushed with blood; it may be called burning anger; in the other, a deadly pale and livid hue overspreads the face, the features shrink, and the skin is corrugated; this is pale rage.

As soon as the first of these is excited, the impressions are directed to the heart and arteries, and they are excited to a preternatural degree of action; the blood is propelled with violence to the surface of the body, and it circulates

circulates with force and rapidity through the smallest and most extreme arteries ; and hence the burning heat which characterizes this sort of passion. The face becomes flushed, the eyes sparkling, and inflamed, and the breathing convulsed and irregular ; the blood, therefore, cannot return readily to the heart, the veins in the face and neck swell, grow tumid, and seem ready to burst. The excitement which arises in the muscles from the increased quantity of blood that circulates through them, throws them into a commencement of contraction, and the feeling which arises from this prompts us almost as much as the ideas themselves do, to give them full action.

In this state of general disorder of the system, it is impossible the mind can receive any impressions but those arising from the passion ; it is also impossible to listen to the general judgments which govern men at large, and the voluntary actions, therefore, become quite unreasonable, and often injurious to others ; for if all fellow-feeling, and the recollection of principles are destroyed by the influence of

pain, the desire of removing the cause of it becomes so great that the means are not always well chosen. Anger, when very violent, may therefore be said to be a real delirium, not only on account of the painful ideas destroying judgment, but also on account of the preternaturally increased action of the vessels of the brain, "*Ira furor brevis est.*" Let no improper or false conclusion be drawn from this philosophical fact. Let no man condemn the punishment which society inflicts on those who yield to any criminal impulse of this passion; it may appear to be cruel in regard to the individual, but it is judicious in regard to society; for it is by restraint that the fury of the maniac is quelled; it is by opposing fear to anger, that anger is to be subdued. If the terror of public shame and punishment be associated in the mind with the excesses of anger, the one will not arise without the other, the poison and the antidote will be inseparable; and the hand that would at times have been prompted to take away the life of a fellow citizen, will be arrested by the sudden and associated thought of his own danger.

The more immediate corporeal effects of this passion which have been mentioned, often become the cause of much injury, and great danger to the individual. The violence with which the blood is propelled to the head, as well as to various other delicate organs of the human frame, and the difficulty of its return, which is owing to the disordered state of respiration, often produce such an accumulation of blood as to occasion apoplexy. “ A burger of Bern,  
 “ in Switzerland, of the name of Rust, an  
 “ excellent and pious man, about fifty years  
 “ old, of a bad habit of body, and subject  
 “ to costiveness, happened to quarrel with  
 “ another person at an entertainment. In the  
 “ heat of the affray he received a slight blow on  
 “ the face, which increased the passion so much  
 “ that he fell down apparently, dead, and re-  
 “ mained a considerable time in this state.  
 “ Upon recovering himself he went home,  
 “ and complained much of head-ach; never-  
 “ theless he ate a little soup, which he soon  
 “ vomited, together with the other contents  
 “ of his stomach. He then went to bed, and  
 “ slept tolerably well until one o’clock next  
 U 2 “ morning,

“ morning, when he was struck with an apoplectic stroke, of which he died the same day.” HELDANUS, *Cent. vi. Observ. xi.*

In other cases, the blood having a tolerably free return, does not produce any congestion; but the irritation from the painful ideas, and the quickness of circulation, produce delirium. MORGAGNI, *Epist. xxxvii.* and epilepsy, profuse hæmorrhages from the ears, nose, and lungs, have also frequently occurred. Consult PECHLIN, *Lib. iii. Obs. 25.* FAB. HELDANUS, *Obs. Med. Chirurg. Cent. i. Obs. 18.* and HOFFMAN, *Tom. IV. part 2. p. 47*, where he relates a case of profuse hæmorrhage from the hæmorrhoidal veins, in consequence of the same passion.

One of the most singular effects of anger is on the liver and its appendages. In some constitutions, especially those which are greatly disposed to bilious complaints, a violent fit of anger is often sufficient to produce a very diseased secretion of bile, altering it in a short time,

time, not only in quantity, but also in quality. The only principle on which this curious phenomenon seems to depend, is the well-known sympathy which exists between the brain and liver; we find the same phenomenon take place, when an injury is received on the head, especially such an injury as produces a great determination of blood to that part. The fact itself is well established, and has been observed by various authors of the first authority. The most common complaints produced by this diseased secretion of bile, are violent colic pains, and bilious diarrhoea. See HOFFMAN, *Med. Syst.* Tom. IV. part ii. p. 255. and part iii. p. 250; also TULPIUS, Lib. ii. cap. 20. PECHLIN, also, in his *Obs.* Lib. iii. *Obs* 25. mentions a curious case of an apothecary “ who was of such a passionate and irascible “ disposition, that if he had no one to quar- “ rel with, would grow angry by himself;” and hence it happened that he was often afflicted with the most excruciating colic, and at last with a real tympany, of which he died.

In



In some cases, jaundice has suddenly arisen after a violent fit of anger. This may happen in consequence of a spasm affecting that part of the duodenum into which the ductus communis cholidicus empties itself, or by a spasmodic contraction of the duct only, or by the propulsion of a biliary calculus into the ductus communis, if any previously existed in the gall-bladder.

A passion so extremely violent as this, which acts like a powerful stimulus to the whole system, must soon exhaust the irritability of every vessel in the human body; accordingly we find that not only the greatest disorders occur in the various viscera when it is excessive, but that the whole strength is often so completely exhausted as to be followed by obstinate fainting, convulsions, and death itself.

If anger act in the way mentioned, it is evident that it may, at times, effect very surprising cures. In all cases of paralysis the irritability of the muscles of the parts affected are

are generally accumulated, while the vessels which secrete the nervous fluid are in a state of torpor, and do not perform their office properly; the cause of the disease is less frequent in the head than is commonly suspected. If the sentient principle, or nervous fluid, is only scantily secreted, the sensorial impressions of volition cannot be conveyed to the muscles of the paralytic part, and therefore these muscles do not obey the dictates of the will. At a certain period of the complaint, however, when the blood vessels of the nerves begin to be a little re-excited, the sensorial impressions of any violent passion, such as anger, shall be so great as to pass along the nerves, and by acting as a topical stimulus in its passage, shall re-excite these vessels into a stronger degree of action, and thus cure the disorder. It is in this way that the sudden cure of palsy, by anger, may be accounted for, many cases of which are mentioned by TULPIUS and VALERIUS MAXIMUS, and of which other instances are recorded in the *Acta Hafniensa*.

Anger seldom terminates in permanent insanity; except there be strong predisposition to the complaint, but on the other hand that diseased state of the brain which lays the foundation of mania, strongly predisposes to this passion. All the signs which characterize maniacal delirium, are nearly similar in kind to those of excessive rage; the expressions and gestures are always violent and offensive, the actions injurious, the eyes red and inflamed, the countenance flushed, swollen, and distorted, and the person ungovernable. See *chapter on Delirium*.

## CHAPTER VI.

## ON LOVE, ITS MODIFICATIONS AND EFFECTS.

*Love is a mixed passion. Of what it is composed. Analysis of its elementary parts. Of animal desire. Of lust. Why women are more moral than men. Of the corporeal effects of this desire when restrained. The opinion that animal desire is love, and that love is the same in all animals, proved to be erroneous. The opinion that love is a pure sentiment of the mind equally false. What the moral qualities are which excite love. Whether learning in women is prejudicial to love? The most romantic love may arise suddenly. How this happens? The singularities of many love-matches accounted for. The effects of successful love on body and mind described. How benevolence, kindness, and generosity, are the offspring of love. The effects of unsuccessful love, and disappointed love, on mind and body. How it may terminate in suicide. In what cases unsuccessful love terminates in insanity. A case. How it may terminate in murder. A case similar to Mr. HACKMAN'S.*

## I.

Most sacred fyre, that burnest mightily  
 In living breasts, ykindled first above  
 Among th' eternal spheres and lamping sky,  
 And thence poured into men, which men call love!  
 Not that same which doth base affections move  
 In brutish mindes, and filthy lust inflame,  
 But that sweet fit that doth true beauty love,  
 And choseth virtue for his dearest dame,  
 Whence spring all noble deeds and never dying fame.

## II.

Well did antiquity a god thee deeme——

*Fairy Queen.*

UNTIL the age of puberty, true love is never felt in the human breast; and the facility with which we are affected with this passion generally decays in proportion as we advance beyond the meridian of life; for the fondnesses and attachments of children of different sexes, and the irregular desires of old people, are not of its nature; the first want the inclinations which are natural to the passion, the second have nothing but false desires, arising from the disorderly influence of a corrupt store of loose ideas.

Love is a mixed passion, founded on the one hand, on the natural desire of the sexes, and

and on the other hand, on desires which, although not so ungovernable as this, are more lasting in kind, and purer in their object; they are commonly called sentiments of the heart. The union of the sexes is the work of nature, and is a law which all men, in common with all animals, obey; the union of mind is not only peculiar to man, but is not even general among mankind; for it appears to be the offspring of civilization and culture; by the first mentioned desire, the great object of animal life is completed; by the second, the sphere of happiness is increased and promoted.

Of all the passions which subjugate human reason, this is, doubtless, the most irresistible in its attacks, the most insidious in its progress, and the most powerful in its effects; ambition, pride, self-love, parental and filial affection cannot enter into competition with it; it resists them all, conquers them, and has even made a sacrifice of friendship and brotherly love. But it is not the object of this work to speak of the effects which the passions

sions produce on society, but to analyze them, and describe their influence on the individual. Now, in order to do this in a scientific manner, it becomes necessary to trace the origin and the nature of its constituent parts; and first, then, of the desire of the sexes as one of the elements of love.

As mankind may be considered as being at all times exposed to animal desire, from the state of puberty until debilitated by age or excess, I mean when compared with the rest of the animal world, in whom, in general, the instinct occurs at certain periods only; it is probable that this is the reason why our desires are less violent than those of the brute creation. No sooner is the impression felt by them than the means of gratifying it are sought after with a degree of ardour which borders on fury. The whole frame of the animal seems to be actuated with new force and vigour, its motions are quick and rapid, its eyes glisten, and its nerves seem to circulate fire; food is neglected, fences are broken down, the beasts of prey become more savage and

and dangerous than ever, they range through the forests and fields, plunging into the deepest rivers, and traversing rocks and mountains, to meet the objects destined to quell the impulse by which they are propelled.

Tempore non alio catulorum oblita læœna,  
 Sævior erravit campis; nec funera vulgò  
 Tam multa informes urfi, stragemque dedere  
 Per sylvas: tum sævus aper, tum pessima tigris.  
 Heu! malé tum Lybiæ solis erratur in agris.  
 Nonne vides ut tota tremor pertentet equorum  
 Corpora, si tantùm notas odor attulit auras?  
 Ac neque eas jam frena virûm, neque verbera sæva,  
 Non scopuli, rupesque cavæ, atque objecta retardant  
 Flumina correptos undâ torquentia montes.  
 Ipse ruit, dentesque fabellicus exacuit. fus,  
 Et pede profubigit terram, fricat arbore costas,  
 Atque hinc, atque illinc humeros ad vulnera durat.

VIRGIL. Georg. lib. 3.

Although in man, as well as in other animals, the desire arises out of a corporeal feeling, yet we do not act in blind obedience to it as they do. A number of causes may give a different direction to our will, the impulses of which, under such circumstances, always counteract and often overcome those of animal desire.



desire. In women, especially, in whom ideas of the immorality, danger, and state of degradation attending the loose indulgence of such passions are early and strongly inculcated; the desire no sooner arises to a certain degree, than by the laws of association of ideas, some of these thoughts present themselves to their minds and rescue them from danger. The early habits of restraint to which they are accustomed by a judicious education facilitate this ready change of thought, and thus tend to diminish all the impressions of loose desire, and preserve the honor of the sex. The moral education of young men being greatly different, in this respect, from that of the opposite sex, and their desires being stronger from the physical constitution of their frame, it rarely happens that they do not soon yield to the force of the internal impulse.

In regard to the influence which this desire has over the individual, as much depends on his constitution as on education; for as the physical constitution of no two men is alike, and as this desire depends, in the first instance;

on the action of certain vessels which are not under the government of his will, it is evident that there must be a very great diversity among men in this respect; some burn like fire, others are naturally cold as ice; and between these two extremes, every variety, in respect of degree, is to be met with. It is by no means incumbent on me, and certainly it is not my intention to dwell on these varieties. The one extreme already described constitutes lust, the other that peculiar disease which physicians call *Anaphrodisia*.

In order to demonstrate how much lust depends on the mere organization of man, and especially on the action of a certain set of vessels and glands, it may be mentioned, that circumstances which in the generality of people damp animal desire the most powerfully, produce very little effect on a lustful person; fatigue of body, and a low diet, the most powerful of all correctors, seldom produce much effect; as to medicines, they are seldom employed without danger. If a person of such a constitution is strictly educated, and is

powerfully

powerfully restrained by principles of morality, a contest often arises between mind and body, which now and then terminates in mental ruin or in a lingering death. STAHL, in his *Theoria Vera*, ascribes the origin of many cases of insanity to an unnatural check being given to certain natural desires, and ZIMMERMAN, in his book on Experience, mentions a remarkable case of a MARQUIS DE RENTY, who resolved to abstain from all connexion with women, and who fell a victim to the experiment. GALEN remarks, that those who shun every indulgence of love generally grow languid and heavy; some are much depressed and uncommonly melancholy, and they at last lose their appetite and powers of digesting, *De locis et affectis*, Lib. iv. cap. 6. FRANK, the present Professor of the Clinical Institution at Vienna, in his truly elegant and learned work, entitled *a System of Medical Polity*, relates the case of a lady of his acquaintance, of a warm and amorous constitution, who was unfortunately married to a very debilitated and impotent man; and who although she often betrayed, unawares, by her looks and gestures

tures, the secret fire which consumed her, yet from strong moral principles resisted all criminal gratification. After a long struggle her health at last gave way; a slow fever seized her and released her from her sufferings.

It must be confessed that such cases as these are by no means common, nor will any one consider them, it is to be hoped, as circumstances which either recommend, or justify the criminal indulgence to which this desire often gives rise; for it is an undeniable truth, that these may, in general, be resisted, not only with impunity, but with benefit to the individual.

Such is the nature and the character of that desire by which man, in common with all animals, is impelled to propagate his species. The savage, unendowed with any ideas but those which are connected with his own existence, and those which arise from the impressions of pleasure or pain to which his body is subject, is governed by this instinct as he is governed by hunger or thirst; he knows no

other tie which binds him to one of the opposite sex. I do not speak of all those whom we denominate savages; for many of these, from the increase of population, are forced to live in society, and begin to acquire the notions which are common to society in general; but where no other law than that of force has any influence, we find the women reduced to the most abject state of slavery, and either shut up for the occasional gratification of sensual pleasures, or else are indiscriminately used by any one who feels a momentary inclination for them. If among certain savage tribes a selection of any female is made, the preference arises either from personal beauty alone, or from motives of interest. The women are always slaves, and are obliged to do the most laborious and meanest offices; no sense of gratitude is ever felt for the pleasures they bestow; no attempt is made to render them service, or augment their happiness; neither is value set on any other endearments than those to which lust prompts.

Many

Many authors, from the earliest times, have dignified this kind of desire with the name of love.

Omne adeo genus in terris hominumque, ferarumque,  
Et genus æquoreum, pecudes, pictæque volucres  
In furias ignemque ruunt: *Amor omnibus idem.*

This sentiment VIRGIL borrowed from certain Greek philosophers; but among that enlightened people, another sect, equally respectable and learned, entertained an abstract opinion of love, which was the very opposite of this; they conceived it to consist intirely in a secret sympathy of soul, which was free from all corporeal desire. At the head of this class of philosophers was the divine PLATO. Love, according to his notion, was a pure pleasure, derived from the perfection of mind. These two opposite opinions have flowed down the stream of time, through the regions of science, to our days; and of the philosophers of the present day, there are some who, like the ancients, degrade the passion to the rank of a mere animal desire, while others make it consist in mental pleasures

only. These conclusions, however, are not drawn from the real nature of love, but from false theory, or moral prejudice. The admiration of the mind, alone, does not constitute love, inasmuch as the sex of the individual is of no account in such an affection; and on the other hand, the admiration of the personal charms of the opposite sex, as it has for its object mere animal gratification, is mere animal desire.

When we inquire into the nature of the moral qualities which, in combination with personal charms, give birth to the emotions of love, we readily discover that they are not the higher qualities of mind. It is not on account of a superior memory, imagination, or judgment, that either a man or woman is beloved. These, doubtless, may occasion the sentiments of respect, but they do not excite the fond affections of which we are treating. In regard to the female sex, it is certain that a woman endowed with an extensive and retentive memory like that of CYRUS, with the erudition of a GIBBON, or the judgment of a MANSFIELD,

will rather avert than promote love by means of such endowments ; for there is a species of awe connected with the admiration of these, which damps and often forbids the familiarities to which this passion gives birth, and in which its most lasting pleasures consist. Let not the fair sex believe, as is too commonly the case, that men are jealous of learning in them. Men only regret that learning sometimes tends to destroy the female character, and to rob it of many of the softer and more endearing qualities for which the sex is pre-eminently distinguished. It is a lamentable truth, that the qualities of the heart, as they are commonly called, often suffer by the culture of the head. Affability, an amiable, uniform, and cheerful temper, elevated sentiments uninjured by affectation, decency and elegance of manners, a correct, but not a masculine judgment, a quick and pleasant wit, a humane and gentle disposition, a feeling heart, sympathizing with all the gay and kinder passions, as well as with grief and pain ; these are the principal moral charms which, when joined with personal beauty in the fair sex,



sex, fascinate almost every heart. But these often suffer by intense study, and by the removal of what are called prejudices of religion and morality; and hence a certain degree of erudition, and strength of mind in an equal degree, are often hurtful to love. On the other hand, I hope it is almost unnecessary for me to add that, although the admiration of the higher powers of the understanding in women seldom enters into the composition of this passion, yet the neglect of these faculties is often a reason why the common exciting causes fail to produce their proper effect; for as every thing which is likely to create aversion, or even indifference, is a fatal poison to this passion, and as ignorance, and want of sense, cannot give birth to any other sentiments than these, their influence may be easily divined.

As love is to be considered as a complex system of desires, made up of animal desire and the desires which create and confirm friendship, the first must cause us to set a certain value on personal charms in the person we love, and the second induce us to seek for amiable, useful, and lasting

ing

ing moral qualities. Personal advantages, then, must be of equal use to both sexes, in promoting this passion; but the moral qualities which one sex values in another, may be different, inasmuch as the opinions of people are different; and as the wants of the two sexes which make them desire a friend also differ in many respects. Both sexes require an indulgent companion, and therefore amiableness of temper, affability, gentleness, and good humour, are moral qualities which they both set a value on; but the female requires a protector, and therefore loves in a man all the qualities which fit him for such an office; she admires him for his personal courage, his fortitude, and strength of mind, superior learning and abilities, and for every endowment which raises him above the common herd of mankind. As a man does not want a protectress in a woman, he does not admire a female endowed with a masculine body or masculine mind.

It may be asked, if true love consists in the united influence of the moral qualities mentioned,

tioned, and personal beauty, how it happens that it so often arises at first sight?

As to the fact, it must be granted, that many people have become deeply enamoured the first moment they have beheld a certain object; and so truly have they been in love as not to be conscious of having been governed by any sensual motive whatever, but have regarded the beloved person with all the idolatry which characterizes the purest and most romantic affection. If unacquainted with the person, (for acquaintance is not necessary to such love) a secret adoration is, in such cases, often silently maintained for a great length of time, until occasion by frequently presenting the object, or imagination by often renewing the picture, inflames the passion to such a degree, as to make the person incapable of acting as good sense would otherwise dictate. Such lovers, except accident strangely favours them, must generally be unsuccessful, for they seldom wait until they shall have taken such steps as to secure a conquest. Now, in regard to such people, a curious question arises, which

which is, upon what principle is this sudden and romantic admiration to be explained? They have not, from any personal acquaintance, had any proof of the moral qualities of the person they love, and yet their love is as much founded on a supposed moral beauty as on personal charms.

The true explanation seems to be this. Every person is endowed, to a certain degree, with physiognomical science, founded on the cast of features of those who reared us in our infancy, and of those who have been our associates through life. We think that experience has uniformly shewn us, that a certain cast of features betrays a certain moral character; and this kind of judgment becomes so habitual to us, that we all form prepossessions, either in favour or against other people, at first sight. If a person, then, of either sex, shall appear to one of the opposite with an expression of countenance which shall be characteristic to this one of the moral qualities which he or she most esteems, and consequently with a countenance which awakens the most lively emotions

emotions of pleasure, and, in addition to these, the person has every advantage of external form which can please the senses, it is evident that the passion may be immediately awakened; and when it is awakened in this kind of way, it will be equally powerful and equally pure, though not so reasonable as that which is the offspring of long acquaintance. It may be further remarked, that as there has not been any experience of the person's real character, there is consequently nothing which can tend to diminish the favourable impression which was at first made. That great observer of human nature, our immortal SHAKESPEAR, has, acknowledged the influence and frequent operation of this principle, by making many of his most exalted lovers suddenly fall into the most romantic love, such, for instance, as Rosalind and Orlando, and Romeo and Juliet.

This occult principle is, doubtless, the principal reason why we see so much diversity of taste, as it is called, which is daily exhibited in love matches. As it is not an object of understanding, there is, consequently, no common principle of conviction for the judgment;

ment; and it is, therefore, absurd, and the very height of human presumption, to pretend to decide concerning the reasonableness of the affections of another person.

In the artificial state of polished society many desires arise, the emotions of which may occasionally supersede those which are most natural to man. The singularities which these produce in love occur frequently; for if the gratification of such desires is more ardently sought for than the others which are natural, they will certainly become powerful motives in the choice of a companion. There is one principle, indeed, which all mankind acknowledge to be a sufficient cause of sexual attachment: I mean personal charms, or a combination of beauty and elegance of form; because all mankind being possessed of animal desire, they can easily enter into the feelings of another, and judge of their effects when excited by such causes; but when the principal source of affection is derived either from real or supposed moral qualities, there cannot, as has been already explained, be any basis  
-for

for general agreement; for the same moral qualities are differently valued by different people.

The most difficult part of this subject remains to be treated; namely, the effects which this wonderful passion produces on the mind and body.

As it is composed of several desires, and as all desires act as powerful stimuli, hence we find that, whether love be reciprocal or not, one of its constant features, in regard to mind, is a certain degree of inquietude, arising from the extraordinary exercise or excitement which it gives to several of the mental faculties. It is superior to every other desire, and its object, therefore, is constantly present to the fancy; hence the sleepless nights which lovers pass, hence their neglect of health and the more usual concerns of life, their abstraction from society, their foolish conduct on many occasions, and their numerous and extravagant reveries.

When

When once love is admitted, and the sentiments of the beloved object are not known, the body partakes of the disorder of the mind; the pulse is generally accelerated, and the action of the heart becomes irregular; for the rapid changes of the thoughts from hope to doubt, and from fancied success to fancied disappointment, produce opposite effects on the circulation of blood, and flashes of heat are succeeded by chilly fits or partial sweats. The usual bodily feelings do not excite the attention as they formerly did, and the appetite for food is, therefore, often apparently diminished; but the real fact is, the sensation of hunger does not reach the mind, and the food is neglected.

We naturally desire the preservation of that which yields us pleasure; and hence benevolence, kindness, and generosity associate themselves to love. In the desires which serve for a basis of these last-mentioned passions all idea of self appears to be forgotten; friends, fortune, the opinion of the world, and life itself, are at the command of one being;



being; and we, therefore, are capable of being either ennobled or debased by the person we love. This is peculiarly the case with women, who are very apt to embrace the sentiments of their husbands if they continue to love them. The dependence of a lover is much more strongly felt by the female than by the male sex, and hence the sacrifices which they make are commonly much greater, and more generous than those of men. I mean where women really love; for it is certain that necessity and interest more frequently determine their choice than those of men.

Successful love is almost exactly similar to joy in its operation on the mind and body. The circulation, respiration, and the heat are increased, every action and movement become livelier and more easily performed, and an increase of animation seems to spread itself throughout the whole frame. Although transitory doubts and terrors still haunt the mind, yet they are not so frequent but that the bliss of success inspires an almost constant flow of pleasure. A minute description, therefore,  
of

of this kind of love need not be given here. Unsuccessful love and disappointed love may terminate in the same manner, as most causes of mental pain; the impressions (if the object which excited them be removed or avoided) gradually lose their force; and judgment being therefore no longer fettered, they will at last be totally destroyed. But in certain constitutions, or even where the object is frequently seen, or the remembrance cherished and renewed, instead of being opposed, deep melancholy necessarily arises, which, in some cases, shall gradually undermine the health of the person, and occasion all the symptoms of a slow remitting fever, and, at last, terminate in complete atrophy and wasting. In other cases, however, in which mental irritation is impatiently borne, despair may suddenly arise, and this may terminate fatally in the various ways which have been described in the chapter on Grief.

Disappointed love and unsuccessful love are often said to occasion insanity; but this is an effect which I believe to be a much rarer event than

than what the world at large imagines: not that the pain of disappointed love is not as great as that of any other cause of grief, but because grief itself seldom terminates in permanent delirium, except there be a considerable degree of predisposition to aberration of reason. One circumstance, which has evidently tended to give birth to the opinion that love is a common cause of madness is, that when insanity is about to break forth, both the exalted state of the imagination and the increased sensibility of the body, dispose to this passion; and it frequently happens, that the very first symptom by which the disease shews itself, is the person's fancying himself to be violently in love. As such a passion is more frequently unreasonable in regard to its object than reasonable, so it naturally is opposed, or not attended to, and the refusal or disappointment, if it can be so called, produces a paroxysm of mania. In the 5th Vol. of the *Psych. Mag.* part 2, art. 4. there is a case related, which, were it not too long, might be wholly inserted here as an elucidation of this position. The following, however, is a concise account of it. A young  
man

man, a Mr. H. having frequent opportunities of visiting an actress of the Cassel stage, who was more admired for her personal charms than theatrical talents, became at last so desperately in love with her, that he offered her his hand in marriage, and made her a valuable present of jewels at the time he declared this intention. The lady, however, had other engagements or other views. She refused his offer, and returned the gift. Like a truly desperate lover, Mr. H. flew to his mistress, fell on his knees, and implored her to be more favorable to his wishes, and to reverse the cruel decree she had pronounced. But she remained inflexible. During the warmth of the argument in which they were engaged, a man, high in rank and power, who was in the habit of paying the lady occasional visits, unexpectedly entered the apartment. Mr. H. was extremely agitated and frightened at his appearance, and fled from the house as pale as death. At the door he met one of the servants of the fortunate lover, and addressing him with much civility, he requested that he would not mention his name

to his master; but the servant told him that it would be of little consequence, as he was well known to him. On learning this he became quite delirious; threw himself at the feet of the servant, and begged of him, in the most earnest manner, to use his influence with his master to obtain mercy; adding a great deal more nonsense suggested by the hurry of his spirits. He then ran home in violent agitation of mind, and passed the night in drinking. Such moral and physical violence could not be long withstood, either by mind or body. He threw himself on the bed, fell asleep, but awakened soon afterwards in a violent delirium; in which he talked alternately of his supposed transgression, of the fear of being punished, and of his mistress. In the course of a few days the fury of the paroxysm was abated, but the delirium continued, and was at last converted into a case of complete hydrophobia; of which he died on the fifth or sixth day.

Sudden transitions from joy to grief are, of all causes of mental pain, those which give the

the greatest shock to human fortitude and human reason. What words shall paint the anguish of a lover, who, after having been buoyed up in his expectations of happiness, by the repeated avowal of consent in his mistress, is unexpectedly informed by her, that she withdraws herself from her engagement! What if he hears that no reasonable scruple is productive of this sudden change, but that another man, more fortunate than himself, is likely to possess her?

Let no frozen heart pass judgment on the conduct of one exposed to a similar misfortune. If the feelings be acute, and the judgment not very strong, a thought arises which appears to be the effect of sudden delirium; the pain that is felt prompts to the removal of its cause; and murder follows. This is not to be considered as the act of love, however, but a sudden impulse of jealousy or revenge. Compare the story of Mr. HACKMAN and Miss RAE with the following one, and it will be seen that, in the moral as well as the physical world, similar causes always produce

Y 2 similar

similar effects. The case is extracted from the *Psych. Mag.* Vol. 5. part 2. p. 47.

In W——, a small village of Saxony, there lived a poor but honest and upright Curate, who for many years had enjoyed, without alloy, the tranquil pleasures of domestic happiness. He had a wife and an only daughter. Content within the sphere in which they were placed, and unacquainted with the turbulent passions of the fashionable world, their days flowed quietly on in an uniform course of undisturbed felicity. The mother and daughter took a joint care of all the domestic concerns, and strove, by every considerate act of attention and love, to diminish the burthen which the duties of the good old man imposed on him. LOUISA (this was the name of his daughter) was in the strictest sense of the words, the child after his own heart. He was unhappy if she was absent even for a few hours, and she was therefore his constant attendant. LOUISA was about eighteen years old, but had not yet experienced the inquietudes of that passion which often exhibits itself in very early life

life in the great world, and her principles and mode of thinking were too noble and good to inspire her parents with even the slightest apprehensions as to the wanderings of her heart—But hear the story.

It is the custom, in that country, for the cavalry to be quartered, during the time of peace, in different villages, where it is maintained at the expence of the peasantry. Many of these foldiers are riotous young men, who, by virtue of their profession and uniform, have an entrance into the houses of all the peasantry, and even of the curates and schoolmasters. One of them, a handsome but giddy young man, was quartered at W——, where he soon made the acquaintance of the good old parson.

The young foldier had more culture of mind than is commonly met with in such a class of men. He pleased the curate; they met frequently, and often sat up till past midnight, entertaining themselves with the histories of battles and warlike atchievements, of which



which each of them knew an abundance of anecdotes.

LOUISA found great entertainment in the company of the warrior, and like OTHELLO's mistress, the story of his life, the battles, sieges, fortunes that he had past, the hair-breadth 'scapes, the moving accidents by flood and field o'ercame her heart. Love had taken possession of her bosom before she was aware of its approach. The progress of this passion, when once admitted into the human breast, is as swift as an arrow. She blushed when he took her by the hand, and was unhappy when he left her. The soldier could not resist the beautiful girl, his heart was formed for love; they therefore soon came to an explanation, but carefully concealed their mutual attachment from the parents of LOUISA; for they were justly afraid that prudential motives would cause them to oppose it. They bound themselves to each other, however, by an oath which at the same time that it shewed the strength of their affection, exhibited the most romantic turn of mind. They promised

to

to marry each other as soon as he should attain the rank of Serjeant-Major, and agreed that the one should destroy the other who first failed in the engagement.

Thus matters stood when, contrary to the hopes of the lovers, a lawyer from a neighbouring town applied to the father of LOUISA for the hand of his daughter. He was well received, and his views promoted by the old people; but when his intention was declared to the unfortunate girl, she fell in the arms of her father as if struck with lightning, and upon her recovery she wept bitterly, and intreated him not to encourage the addresses of this new lover.

Her parents, being ignorant of the true cause of her aversion, thought that time alone would overcome it, and they therefore gave their solemn promise to the lawyer, and resolved to employ every means in their power to second his wishes. LOUISA, however, resisted every argument and remained true to her promise; but her parents at last, growing tired  
of

of her opposition, determined to employ their authority. The means that were made use of are not known, but they were attended with success. The young foldier soon received the intelligence, and from that moment defifted from vifiting the parfonage. His refolution was taken—without the girl he could not live.

A fhort time before the marriage day a ball was given in W——, in honour of the pair. To this he reforted, unable any longer to refift the defire of feeing his LOUISA. He concealed himfelf among the fpectators until he faw her dance; this roused him to a ftate of fury; he ran home, took a pair of pistols which were loaded, and waited until the party broke up. It was a dark night, but he difcerned the unhappy girl and her intended bridegroom walking hand in hand. He ftept up to her, and in a low voice requested that fhe would indulge him with a moment's converfation. She difengaged her arm from that of the lawyer, intreated him to walk on, affuring him fhe would immediately return; but alas! it was the laft minute

minute of her existence: a pistol shot was heard, and when her friends reached the place, she was seen lying weltering in blood at the feet of her murderer. Now art thou mine again! cried the foldier, I will come immediately; and with these words he disappeared, favoured by the obscurity of the night: but he did not fly to escape. He delivered himself to the officers of justice who were nearest the place, and desired to be instantly executed; which event indeed soon followed.

*"Cætera, de genere hoc longum est si dicere coner."*

## CONCLUSION.

1. **T**HE phenomena of Delirium arise when diseased perceptions are mistaken for realities.
2. Diseased perceptions arise from physical or corporeal causes, and from moral or mental causes.
3. Corporeal causes produce delirium, by exciting such a derangement in the brain as prevents external nervous impressions from exercising their natural influence on the mind; and hence delirious people either mistake external objects, or do not attend to them.
4. Every altered state of brain which does not amount to a certain degree of destructive pressure, excites, by the laws of thought, a  
mental

mental perception, but as the sensorial impressions of diseased action are different from those which are derived from external objects, so the images which are excited in the representative faculty are also different. But nothing can be represented in the mind which has not formerly been received through the medium of the external senses, or concluded by the operations of reasoning; and therefore, all the ideas of delirious people, however different they may appear to be from any thing which has formerly been seen, heard, touched, tasted, smelt or concluded, are only new assemblages or combinations of prior sensations and thoughts. The representations of delirium, therefore, are in this respect, like those of the faculty of fiction.

4. Corporeal causes of delirium are of two kinds. The first act by altering the action of the arteries of the brain and nerves; the second by yielding morbid impressions, which either impair, or prevent the transmission of natural external nervous impressions, in their progress to the mind.

5. The

5. The first class of corporeal causes produce mania and the delirium of fevers; the second, hypochondriasis and the delirium of nervous or hysterical patients.

6. As it has been proved, that in mania there is every appearance of a morbidly increased action of the vessels of the brain, more especially of those which secrete the nervous fluid; and as all increase and every alteration, in the nature of this fluid, must increase and alter sensibility, and consequently cause the sensorial impressions to act with unnatural violence, so the most striking features of mania may be accounted for; as, for instance, the want of sleep, constant raving, and fury.

7. Although it happens that mania shall appear, at times, to arise from the influence of violent passions, or from overstraining the faculty of fiction, yet this seldom occurs except there be much predisposition to the complaint; and as in such cases, and indeed in every case, insanity does not occur without its being accompanied by marks of a dis-

a diseased action of the vessels of the brain ; so it may be concluded, that the proximate cause of mania is always to be sought for in this state of brain.

8. The ideas or thoughts which appear to create the mental disturbance of a person labouring under mania, throw no light either on the origin or nature of the complaint; and this circumstance forms a very remarkable distinction between maniacal delirium, and the delirium of hypochondriasis and melancholy; for, in these last diseases, a person acquainted with the human mind, especially with the nature of mental perception, may often receive considerable light from such sources.

9. When the increased action of the arteries of the brain subside, a morbidly weakened action of these vessels is the consequence, the nature of which it is not easy to ascertain, but it is the cause of another delirium; which delirium has a very different moral character from that alluded to above; for the patient, instead of being furious, is gay and social, but



but is still not governed by external objects, or reasonable conclusions.

10. Among the moral or mental causes which produce delirium, grief and fear, and their modifications, are the most frequent; for, although every variety of pride and vanity, ambition, and several other passions which belong to the modifications of joy, seem at times to produce delirium, yet they seldom do so except by exposing a person to the frequent operation of mental pain, such as arises from neglect, disappointment, contempt, and many other kinds of painful humiliation.

11. The painful thoughts produce dejection and despondency in the same way that corporeal pain acts; namely, by exhausting the energy of the brain and nerves, or, in other words, by inducing a torpor in these vessels.

12. The torpor and diminished secretion of nervous fluid occasion an insensibility to external objects, and to the sensations which accompany all natural wants or desires; hence the  
the

the constant engagement of the mind with ideal objects of pain, the solitude, anxiety, and despair of such patients.

13. There are, then, three distinct kinds of delirium, which belong to the order of diseases called *Vefaniæ*. These may be denominated, 1st. *Mania furibunda*; 2dly. *Mania mitis*; and 3dly. *Melancholia*.

14. *Mania furibunda* varies according to the physical causes which excite it.

15. *Mania mitis* varies according to its moral character.

16. *Melancholia*, according to the passions which give birth to it, or the physical causes which induce it.

17. Independently of these disorders which disturb every faculty of the human mind, and all the external senses, or rather the impressions received by the external senses, there are others which only derange particular faculties;

the action of the mind being, in other respects, in a healthy state. These which might be called partial diseases of the mind are of two kinds, 1st. Illusions; and 2d. Weaknesses of the Mental Faculties.

## OF ILLUSIONS.

18. Illusions arise from corporeal causes and from mental causes.

19. Corporeal causes and mental causes produce illusions upon the same general principle that the phantoms which occur in delirium produce a conviction of their reality; namely, by occasioning such impressions as destroy, or greatly diminish the influence of external objects. It may be added here, by way of remembrancer, that the proper influence of all impressions, *ab externo*, is excited on the faculty of attention; and that when a sufficient degree of attention to any object is not given, erroneous judgment arises.

20. The impressions of corporeal causes which produce illusion do not disorder the healthy action of the whole brain, or its arteries; and, therefore, all external objects, associations of ideas, and operations of mind, the sensorial impressions of which do not fall on the same part of the brain as that which receives the diseased impression, produce their natural effects; and the person, therefore, appears to think and act like a reasonable man, except on such subjects as have a relation to the illusion.

21. Corporeal impressions, producing illusion, generally arise in parts of the nervous system which are at a distance from the brain; as, for instance, in the various viscera of the abdomen or pelvis.

22. But all sensations arising from such causes, whether healthy or diseased, are generally referred, by a species of judgment, to the place where they are felt: and, therefore, hypochondriacs entertain false notions concerning their own frame.

23. The

23. The impressions of diseased viscera, such as the stomach, intestines, uterus, liver, pancreas, &c. do not reach the brain until the healthy action of the nerves has been impaired.

24. This injured state of nerves is to be considered as particularly affecting the small arteries, which are destined to secrete nervous matter; but as the easy transmission of nervous impressions depends on the due proportion of solid, as well as fluid matter, which enters into the composition of these organs, it follows, that the sensations must be greatly disordered, and, consequently, we find that, in hypochondriasis, the nerves themselves are fruitful sources of painful feeling.

25. Hypochondriasis, therefore, is chiefly characterized by erroneous notions relating to the patient's own frame, and by painful corporeal feeling.

26. Illusions, from moral or mental causes, arise either from an hereditary over-activity of

the faculty of fiction, or from directing attention too much to imaginary objects, or from the influence of passions; by which means the sensorial impressions of such objects become stronger than those of external objects, and their existence, therefore, is at last more readily believed in than that of objects of external sense.

27. In no instance, whatever, do moral causes seem to produce real illusion, in such people as have no predisposition to the disease, until the healthy state of the brain has been disordered, by the unequal exercise given to it by particular objects of study or of passion. It may, therefore, be reasonably imagined, that the hereditary disposition itself consists in a morbid sensibility of that part of the brain which receives the impressions from the imagination, or faculty of fiction; and that the disorder, strictly speaking, does not exist in the mind.

28. Where the disposition to such a disease is either born with a person, or artificially produced

produced by particular objects of study, the passions may become exciting causes of ILLU-  
SION.

29. As to the weakneſſes of the mental faculties, theſe ſeem to depend intirely on a weak, or debilitated ſtate of brain; whereby the ſenſorial impreſſions, which ariſe from the operations of mind, are not of ſufficient ſtrength and vivacity.

30. Each faculty of the mind is ſubject to ſuch impediments, and, conſequently, may appear to be weakened.

31. Upon theſe deductions is founded the following arrangement of mental diſeaſes.

*Remark.* In the following table the *genera* and *ſpecies* alone are mentioned; the varieties are extremely numerous, and, if they were to be defined, would ſwell the volume beyond all reaſonable bounds.

# GENERA AND SPECIES, AND THEIR SYMPTOMS.

*Class* NEUROSES. *Order* VESANIÆ.

**G. 1. DELIRIUM.** General derangement of the mental faculties, in which diseased perceptions are mistaken for realities; with incoherent language, and unruly conduct.

*Species.*

1. *Mania furibunda.* Delirium, with constant raving, audacity, and fury.

2. *Mania mitis.* Delirium, with raving, and appearance of gaiety and pleasure.

3. *Melancholia.* Delirium, with dejection, despondency, and despair.

**G. 2. HALLUCINATIO, or ILLUSION.** Error of mind, in which ideal objects are mistaken for realities; or, in which  
real



real objects are falsely represented, without general derangement of the mental faculties.

Species.

1. *Hypochondriasis*. Error respecting a person's own health or form, with anxiety, apprehension, and dread; flatulency, dyspepsia, palpitation, tremor, and sense of pain.
2. *Dæmonomania*. Firm belief in the immediate communication with spirits, or persuasion of the power of working miracles, without other symptoms of general derangement of mind.
3. *Vertigo*. Apparent rotatory motion of external objects, and sense of undulation in the ground, with abolished attention and thought.
4. *Somnambulismus*?

G. 3. AMEN-

G. 3. AMENTIA. Diminished power of the mental faculties.

Species.

1. *Fatuitas*. Imbecillity of all the faculties of the human mind, particularly those concerned in associating and comparing ideas; accompanied with want of language, a stupid look, and general bodily weakness.

2. *Memoria imminuta*. Difficulty of recalling thoughts, and incorrectness as to recognizing objects formerly perceived.

3. *Perceptio imminuta*. Difficulty of forming distinct representations.

4. *Vis idearum associandi imminuta*. Deficiency, or total incapability of arranging one's thoughts; giving signs of confusion of intellect.

5. *Vis*

5. *Vis fingendi imminuta.* Total want of genius, or diminished genius.

6. *Vis judicandi imminuta.* Want of judgment and common sense.

A P P E N D I X.

MEDICAL APHORISMS,  
ON  
MELANCHOLY,  
AND  
VARIOUS OTHER DISEASES  
CONNECTED WITH IT.

BY  
JOHN ERNEST GREDING;  
Formerly Physician to the Workhouse at Waldheim.

*Extracted and translated from his Miscellaneous Writings.*

---

I.

IN REGARD TO THE DURATION OF THE DISEASE.

1. **M**ANIA and melancholy have continued half a year with some; with others they have remained forty years and upwards; among whom one patient only, in this workhouse, attained the age of eighty-five years\*.

\* AD. NIETZKI says, in his *Elements of Universal Pathology*, 1766, 8. p. 416. Mania is a  
chronic

chronic and violent delirium. The blood of a maniac always appears to be in violent agitation, and is determined with great force to the brain: hence the eyes appear of a blood red colour, and the countenance pale; the extremities of the hand and feet are so warm that the greatest cold is not felt, nor does any bad consequence flow from their being exposed to it. In the looks of a madman something daring is to be discovered, and his actions are either wilful or cruel. If maniacs are attacked with convulsions, the paroxysms cease, and are followed by an almost total insensibility, or extraordinary prostration of strength. In the same work, he defines Melancholy to be a chronic delirium; and asserts, that those are most exposed to it who have long laboured under Hypochondriasis and Hysteria, and those whose abdominal viscera have been injured, whose mesenteric glands are hard, and in whom the healthy secretions are suppressed: those who are easily subdued by passion, who over-exert their mental faculties, who are born of melancholic parents, who have too thick blood, which through various causes is accumulated in the head. Such patients have cold feet and hands, their countenance is pale, and they are subject to palpitation of the heart  
and

and to a sensation of anxiety. Their respiration is deep and laborious, they are troubled with head-ach and giddiness, their cheeks and lips red, their eyes full of tears, and their sleep disturbed. Their actions accord with their ideas, which are either horrible or agreeable; their natural secretions are either totally suppressed or go on with difficulty: when a vein is opened a black blood flows slowly out of it.

Upon inspecting their dead bodies, the vessels of the head are found distended with dark coloured blood, and the serum is discovered to have been effused between the membranes of the brain. Some parts of the brain are elevated, hard and dry, and the gall is uncommonly thick and black.

ANN. CHARLES LORRY, *de Melancholia et Morbis Melancholicis*, 1765, 8. tom. 1. p.2. says, "Melancholy is that imbecillity of the mind which arises from a vitiated state of the body, in which we are powerfully affected by objects which are either without us, or are the effects of imagination; so that it is impossible to resist the ideas which spring from them, or to withdraw our thoughts from

from them." He assigns three causes for this disease. The first he ascribes to the leek green bile, the second to an acrid mucus, and the third to a mixture of all the humours with the blood.

MECKEL, in his *Anatomico-physiological Researches* into the causes of the various kinds of insanity which have their seat in the body, (See *Memoire de l'Academie Royale des Sciences et Belles Lettres*, Année 1764, a Berlin, 1766) says he has discovered, by the most careful and accurate experiments, that the specific gravity of the brain of a maniac, or melancholic patient, is very different from the specific gravity of the brain of a sane person. A cube of six lines of the brain of a healthy man, weighed one drachm and four, or at the most, six grains, (some difference, however, is observed to arise from the different distention of the blood vessels). But in maniacs, and melancholic patients, the brain is generally harder, drier, and more elastic, and weighs specifically seven drachms. (*Memoires de l'Academie de Berlin*, tom. xx. p. 75.) In addition to this generally diseased state of brain, (namely, the increased hardness,



ness, dryness, and elasticity), particular or local alterations may also occur; as for instance, the formation of stony matter in any part of the brain. Such diseases arise either from a congestion of lymph, or from sharp blood, and great determination of it to the head; or from compression of the brain, or from pus irritating the brain, or from an irritation of the nerves called *par vagum*. Notwithstanding what has been said, the brain of maniacs and melancholic patients, has often been found not to be harder, dryer, or more elastic than usual. (See *Adversar. Med. Pract. Lipsiæ*, 1769. 8. vol. ii. p. iii. pag. 534. *et seq.*)

GERARD VAN SWIETEN. *Commentar. in Herm. Boerhaave Aphorismos de cognoscendis et curandis Morbis*, Lug. Batav. 1753, 4. tom iii. p. 519. *de Mania*, et p. 459. *de Melancholia*. LEOP. AVENBRUGGER, *Medicinæ Doctoris, quondam in Nosocomio Cæsareo Regio, Nationum Hispanico, et Militari Medici primarii, Experimentum nascens de Remedio specifico, sub signo specifico, in Mania virorum*, Viennæ, 1766. 8. THO. WILLIS *opera omnia, a Gerard Blasio*, Amstelod. 1682, 4. p. 167. 179. JOHN BAPT. MORGAGNI *de Sedib. et Causis Morborum per Anatomen. indagatis libri*  
 Vol. II.                      A a                      quinque,

*quinque Venet.* 1762, JOH. C. BEUTEL, *de Mania*, Jenæ, 1648. § xxix. *Frankische Sammlungen von Anmerkungen aus der Naturlehre, Arzneigelahrtheit, Oekonomie und den damit verwandten Wissenschaften*, th. 5. Nurnburg, 1760, 8. p. 23, 294. HERMAN BOERHAVII, *Prælect. Acad. de Morbis Nervorum a Jac. v. Eems.* Lugd. Batav. 1761. tom. ii. p. 444 et 445. *Medicina dogmatica tres Morbos particulares Delirium Vertiginem et Tussim aphoristice conscriptos exhibens Auct. T. DE GORTIS*, Harderov. 1741, 4. p. 5, § 5.

2. There have been only two, who as experience testifies, have died mad when young. The one, who was very much deranged and furious, and was born of a melancholic mother\*, died in his nineteenth year; the other, who had been afflicted with insanity for six years uninterruptedly, finished his life in his twenty-sixth year.\*\*

\* LORRY loco citat. 2 part. cap. 3. p. 284. appears to have spoken rather too rashly, when he asserts that no man was ever born mad or melancholic; for it is very well known, that many are idiots from birth, of whom there are too many in our workhouse at Waldheim; and

and, independently of this, I myself know a case of a child having been absolutely born mad. A woman about forty years old, of a full and plethoric habit of body, who constantly laughed and did the strangest things, but who, independently of these circumstances, enjoyed the very best health, fell, about twelve or fourteen years ago, after a severe and tedious labour, in which she was delivered of a daughter, into very great weakness of understanding. This gradually increased, and, during the last war, she one day entered the forest, in company with her daughter, to fell a tree: owing to her want of foresight, the tree struck her daughter, and destroyed her in a shocking manner. A short time before her husband's death she became pregnant, and, on the 20th of January, 1763, was brought to bed, without any assistance, of a male child who was raving mad. When he was brought to our workhouse, which was on the 24th, he possessed so much strength in his legs and arms, that four women could, at times, with difficulty restrain him. These paroxysms either ended with an indescribable laughter, for which no evident reason could be observed, or else he tore in anger every thing near him, cloaths, linen, bed furniture, and even thread

when he could get hold of it. We durst not allow him to be alone, otherwise he would get on the benches and tables, and even attempt to climb up the walls. Afterwards, however, when he began to have teeth, he fell into a general wasting or decline, and died.

\*\* J. N. ZIMMERMAN, in his work on Experience in Medicine, Zurich, 1768, 8. p. 263. mentions the case of an insane woman, who, a few hours before her death, became perfectly sensible and wonderfully eloquent; and, therefore, he considers the sudden return of reason in a melancholic person as a forerunner of insanity. See also CHR. GOTTL. LUDWIG. *de Plethoriæ differentiis*, Lipsiæ, 1766, 4. p. 9. § 5.

3. Those who are afflicted with epilepsy seldom attain an advanced age; some have terminated their existence in their nineteenth year, others, who were not attacked by the same disease till they were advanced in life, have lived until the age of fifty or sixty\*.

\* HERMAN BOERHAAVE says, in his Aphorisms, that epilepsy is a total abolition of consciousness,

sciousness, and an incapability of receiving impressions through the means of the external senses, accompanied with powerful and involuntary convulsions of all or most of the muscles. See GER. V. SWIETEN, l. c. 3 part. p. 391. JOH. OOSTERD. SCHACHT, *Institutiones Medicinæ practicæ ad auditorum potissimum usus in epitomen redactæ et evulgatæ*. Traj. ad Rhenum, 1767, 4. p. 64. says, epilepsy is a convulsive motion of most of the muscles of the body, together with a sudden projection of the body on the earth, and a temporary abolition of consciousness; so that a person is deprived of the use not only of his internal, but also of his external senses. The cure, he says, depends on three things: 1st. The approaching paroxysm is to be avoided; 2dly, the present one must be alleviated; and 3dly, all returns must be prevented.

E. I. P. HOUSSET *Dissertation sur les parties sensibles du Corps Animal; &c.* Lausanne, 1770, 8. derives the origin of this complaint, not only from a disordered state of the various viscera which are necessary for the concoction of food and chylification, but also from a preternaturally inspissated state of the fluids; which two causes are so intimately connected, that the one always lays the foundation of the other; when,

when, therefore, there is no proof that the disease arises from any other cause, as from a bad formation of the head or a stony concretion in the brain, or from extravasated blood, recourse must be had to mercury as the best resolvent. BOULET considered the pituitary gland as the seat of the disorder, because he once found it in the body of a person who had laboured under this complaint, as big as an egg, and nearly two thirds filled with pus. See also *Histoire des Maladies de St. Domingue*, par MONS. POUPE DESPORTES, Paris, 1770, tom. ii. p. 209. ANT. DE HAËN, *pars quinta rationis modendi in Nosocomia practico*, &c. Viennæ Austriæ, 1763. 8. *Diff. de Ustione Cranii in Epilepsiæ præ.* A. F. DELIO, *Auctore*, Jo. Ph. IV. RUDOLPH. Erlang, 1768. 4. Also MAX. LOCHERI *Observationes practicas circa Luem Veneræam, Epilepsium et Maniam, tria morborum genera in Nosocomio ad St. Marcum, præ aliis maxime olvia*, &c. Viennæ Austriæ, 1762. 8. and THOM. WILLIS, *Opera omnia*, a GERARD. BLASIO. p. tractatus primus de Morbis convulsivis, cap. i. p. 40. Jo. BAPTIST MORGAGNI, *de Sedibus et Causis Morborum*, &c. tom. i. epist. ix. p. 133.

4. Those also who are born idiots seldom attain an old age, as experience proves. Some have

have lived to the age of nineteen; one person only died when forty-one, another lived to the age of fifty-four, and another lived to the age of fifty-nine\*.

\* MECKEL, in his *Anatomical Observations on Scirrhus Tumours and Ulcers of the Brain*, (*Histoire de l'Acad. Royale des Sciences et Belles Lettres, Anne 1760. à Berlin, 1761, 4.*) mentions the case of a fatuitous female, and ascribes the cause of the disease to a scirrhus gland which he found in the brain. He thinks that the nervous fluid was obstructed in the long and debilitated vessels of the left side of the brain, and in the medullary ones of the right side, which were compressed; the convulsions were produced, according to him, by the irritation of a sharp acrid serum. See THOM. WILLIS *de Anima Brutorum*, p. ii. cap. xiii. p. 137.

## II.

### OF THE MANNER OF THEIR DEATH.

I. THE greater number of insane people fall into a state of atrophy or decay towards the close of their life; for it has been found, that

that of one hundred maniacs sixty-eight died in this way; of twenty-six epileptic maniacs there were thirteen; of sixteen epileptic idiots only four; of twenty who were purely epileptical, there were eleven; and of twenty-four melancholic, there were twenty; and lastly, of thirty idiots, there were twenty-one who died of this kind of consumption.

2. Hydrothorax appears to be the disease to which they are most subject; for we have found, that of one hundred maniacs there were seventy-six; of twenty-six epileptic maniacs nine; of sixteen epileptic idiots ten; of twenty purely epileptical, eight; of twenty-four melancholic patients, there were twenty; and lastly, of thirty purely idiotical there were eighteen, in whom the thorax was found full, either on one side or in both of a fluid which was either of the common yellow colour, or of a bloody colour; and, now and then, of a fluid which was extremely stinking and offensive.

Yet,



3. Yet, notwithstanding these appearances, Dyspnœa and Asthma are more rarely met with among such people, than what might be reasonably supposed; of one hundred maniacs, as experience has shewn us, there were only sixteen who laboured under such diseases; and of twenty-six epileptic maniacs there was not one who had any symptom of dyspnœa. Of sixteen epileptic idiots there were, however, five; of twenty purely epileptic, four; of twenty four melancholic twelve; and lastly, of thirty idiots eleven, who laboured under these complaints.

4. Consumption, from an ulcerated state of the lungs, appears to be another disease, which often terminates the existence of insane people; for it has been found, that of one hundred maniacs there were forty who laboured under Phthisis pulmonalis; of twenty-six epileptic maniacs, eight; of sixteen epileptic idiots, four; of twenty purely epileptic patients, seven; of twenty-four melancholic persons, twenty; and lastly, of thirty idiots, there were fifteen consumptive. The lungs of all these

these were found to have several ulcers ; some having a great number, others fewer. One may fairly conclude, that of four such patients, three are completely consumptive, and of these the greater number are melancholic patients.

5. Maniacs and melancholy lunatics, who in general are much troubled with costiveness in the commencement and progress of their malady, are, in the end of their days, of all other people the least frequently affected by it; for, among the whole number of the insane, there were only three maniacs who were affected by it, and of these there was one who had it only occasionally. Among a hundred maniacs, there were thirty who laboured under a diarrhea. Of twenty-six epileptic maniacs, there were five; of sixteen epileptic idiots, four; of twenty purely epileptic, six; and of twenty-four idiots, eleven; all of whom had this complaint.

6. Ascites is by no means a common complaint with such patients. Among the whole  
number,

number, there were only forty-five who had either water or purulent matter in the abdomen; and in many of these the quantity was very small, and did not deserve to be considered as constituting dropsy. Of one hundred maniacs there were only ten who had this disease, and in seven of these the serous fluid had a very offensive smell. In the three others, it was small in quantity and of the natural quality. Of twenty-six epileptic maniacs, there were four in whom a quart (eine kanne) was found. The other three had very little fluid in the abdomen. Of the sixteen epileptic idiots, there were two; of the twenty epileptic, three; of the twenty-four melancholic ones, sixteen; and of thirty idiots ten, who laboured under this complaint.

7. Few insane people die in convulsions; for it has been remarked, that of one hundred maniacs, there were only six who died of general convulsions; of twenty-six epileptic idiots, fourteen; of twenty purely epileptic, ten; of twenty-four melancholic, not one; and

and of thirty idiots, only two, to whom this happened\*.

\* ANT. DE HAEN, *Rationis medendi in Nosocomio practico*, part 3. Vendob. 1760. 8. p. 198. says, that the nature of convulsions consists of an alternate apoplexy and preternatural motion; for the causes of the disease are suddenly sent to the brain, and occasion contractions of the muscles; but, in the moment that the brain becomes more loaded, they are thrown into the very opposite state. *Comment. secund. de Motibus Cerebri, Auctore LORRY, in Memoires de Mathematique et de Physique, présentés a l'Académie Royale des Sciences, &c. tom. iii. Paris, 1760. 4. Nosologia Methodica sistens Morborum classes, genera et species, juxta Sydenham mentem et Botanicorum ordinem: Auct. F. B. DE SAUVAGES, 1763. Jo. OOSTSCHACHT, l. c. p. 64.*

8. If convulsions are rare occurrences among the insane, sudden deaths are still more so. Among one hundred maniacs, there have been but ten who have died suddenly and unexpectedly. Among twenty-six epileptic maniacs,

niacs, there have been four; and among sixteen epileptic idiots, two; of twenty purely epileptic patients, there have been three; of twenty-four melancholic persons, eight; and of thirty idiots, only three; who have departed this world in this way\*.

\* LORRY, in his work already mentioned, says, he has not been able to discover any other cause for such an event than the division and pressure of the medulla spinalis, especially in that part which, in new-born animals, is between the third and fourth vertebral process, but which, in adults, lies between the first and third.

JO. BAPTIST. MORGAGNI *de Sedibus et Causis Morborum, per anatomen indagatis quinque*, Venet. 1762. p. 10. *seq.* GER. VAN. SWIETEN, in the work mentioned, tom. iii. § 1077. p. 427.

9. Insane people are as seldom attacked with rheumatism or gout, or any other painful disorder, as they are with convulsions or sudden deaths. Of one hundred maniacs, there were eight; of twenty-six epileptic maniacs,

niacs, not one; of sixteen epileptic idiots, three; of twenty epileptic patients, none; of twenty-four melancholic persons, four; and of thirty idiots, three, who were affected by such complaints.

10. All the other diseases are still more rare than these; for it has been found, that in all the number of years in which many malignant epidemics have prevailed, no more than five insane people have fallen victims to them; and, indeed, of these five two only can, with certainty, be pronounced to have died of such complaints. One died of a continued fever, and another of a catarrhal one conjoined with excessive delirium.

11. A caries of the bones is a circumstance which is almost never to be met with among such patients; for, of all the number, three only were affected by it. Hardened and enlarged glands, swellings, and the cancer, are full as rare; for, of these, two only have died from such affections. One of these had a profuse hæmorrhage, from an injury he received,  
and

and another experienced, a short time before his death, a profuse hæmorrhage from the rectum.

12. In the whole number of our patients, two only have died of mortification; two lost their lives from encysted tumors, and one from a steatome and foul ulcer, which occupied the whole of the right leg. A stone in the bladder, and a total inability of retaining the urine have only been once observed.

## I.

### ON THE SIZE OF THE HEAD.

IT does not appear that either too large or too small a head contributes to the production of this disease; for it has been observed, that in a number of one hundred mad people, there were only four whose heads were too large, and only two with heads of the very smallest kind. Among twenty-six epileptic insane people, there were four: and among sixteen epileptic idiots, two; whose heads appeared too small. Among twenty epileptic, and four and twenty melancholic patients, there were  
none;

none; and among thirty idiots, two; with very small heads. Six only had large ones\*. The heads of all the others were of an ordinary size.

\* HERM. BOERHAAVE, in his work, *De Morbis Nervorum*, Lugd. Bat. 1761. 8. p. 125. asks this question: Have not idiots larger arteries in the brain than other people? It is at least found, that they have larger heads; but this cannot be considered as being generally true.

## II.

### OF THE STRENGTH AND WEAKNESS OF THE SKULL OF INSANE PEOPLE.

IT is very remarkable, that the skulls of the greater number of such patients are commonly very thick; nay, some have been found of a most extraordinary degree of thickness. Among two hundred and sixteen patients of this description, whose bodies were inspected after death, there were found one hundred and sixty-seven whose skulls were unusually thick,



thick, and only thirty-eight thin ones; among which last number there was one which was much thicker on the right side than on the left. But in particular it was observed, that among one hundred raving madmen, seventy-eight had very thick skulls, and twenty very thin ones; among which skulls there was one quite soft. Among twenty-six epileptic raving madmen, there were nineteen found with very thick skulls, and four very thin; among sixteen epileptic idiots there were fourteen, and among twenty epileptic patients, sixteen who had very thick skulls; among whom there was one discovered, one side of whose skull was thick and the other thin. Among twenty-four melancholic patients, there were eighteen with very thin skulls; and lastly, among thirty idiots, twenty-two with very thick, and six with very thin skulls. All the others had skulls of a natural thickness.

## III.

## ON THE SHAPE OF THE SKULL.

I. EXPERIENCE has proved, that the skulls of almost all insane people are of a natural shape; for sixteen only have had small and contracted foreheads, compressed temples, and large and expanded *occiputs*. A few appeared to have the head too long and compressed at the temples. Some had a head almost round, or of a square shape; these were epileptic idiots. Two others, who were epileptic madmen, had small heads, which were quite circular, but of a natural degree of strength\*.

\* In ERN. PLATTNER's *Specimine secundo de Vi Corporis in Memoria*, &c. Lipsiæ, 1767, 4. p. 11. A number of cases of the preternatural formation of the head are to be found; some had the *os frontis* and the *os occipitis* very flat and compressed; others, in whom the *os frontis* was only about six fingers broad, had the brain quite shrivelled up, but broad in the front, and so contracted towards the back part of

of the head that it was scarcely bigger than a common quill.

2. Beside these preternatural cases, many other particulars have been detected in the skulls of such patients. In some the bones were quite blue, or appeared as if full of blue streaks\*. The parietal bones of several epileptic idiots were found to be uncommonly thin towards the anterior and upper angle, in the middle of which thin spot a small hole was discovered. Another epileptic patient had that portion of the skull, which surrounds the union of the sagittal and coronal sutures so depressed, in consequence of a blow she had received in her early youth, that it formed a tumor on the inside of the head as large as a walnut\*\*. In the skulls of some other idiots there was not the slightest trace of a future to be discovered\*\*\*. And in the skull of a raving madman, aged thirty-five, the *os frontis* was divided down to the nose by the sagittal future, as is now and then observed in children.

\* HERM. BOERHAAVE *de Morbis Nervorum*; a Jo. VAN EEMS. Lugd. Bat. 1761. p. 16, 17. 26, 27.

\*\* HERM. BOERHAAVE, l. c. p. 41 and p. 10. GERARD. VON SWIETEN, loco cit. 1 part. § 267. p. 432. and also § 244. p. 398, 399. where, among other cases, he relates a singular one of a woman, who lost near the half of her skull by an accident. She was a beggar, and carried the piece of skull with her from house to house. If the finger was gently pressed on the *dura mater*, she screamed aloud, and said she saw a thousand lights.

\*\*\* V. SWIETEN, 1 part. § 7. p. 10. § 255. p. 416. and § 267. p. 434. relates the case of a child about eight years old, in whose skull there were no traces of the sagital and coronal future, either on the external or internal surface. This circumstance has also been met with by HUNAUDD, (Acad. des Sciences, l'an 1734. Hist. p. 59.) who, on this account, does not consider it as a rare occurrence.

3. Not only a number of singular variations in the form and qualities of the skull of such patients are frequently observed, but we also  
see

see a great number of holes in its inner table, which in some cases are very large, and in others very small. Out of two hundred and fifteen patients, there were one hundred and fifteen whose skulls presented this curious appearance; but of these there were eight in whom the holes were very small, and few in number. Upon the whole, however, of one hundred maniacs there were forty-nine; and of twenty-six epileptic maniacs, eighteen; of sixteen epileptic idiots, eleven; of twenty purely epileptical, ten; of four and twenty melancholic patients, six; and of thirty idiots, twenty-one; in whose skulls such holes were detected. Out of all this number, there was only one epileptic patient, who had six remarkably large holes of this kind in the skull.

4. Other phenomena observed within the heads of such patients are broad and thick bony projections on the inner surface of the skull, which generally extend from the petrous part of the temporal bone, to the cruciform process of the occipital one. See

HERM.

HERM. BOERHAAVE, in the book quoted, part 1st. p. 141. and also ERNEST PLATTNER, in the work mentioned p. 31. et seq.

5. Upon inspecting the heads of the insane, the *dura mater* is often found to adhere, with a preternatural degree of force, to the skull. Of two hundred and sixteen, whose heads were opened, there were one hundred and seven, in whom a very great force was required to detach the skull from the membrane mentioned. Some of these patients indeed were old, but by far the greater part of them were between twenty and forty years of age.

#### IV.

##### OF THE DURA MATER.

HOWEVER strongly the *dura mater* may be found to adhere to the skull, yet there is often found a quantity of a watery fluid between the two. In some it was in such great quantity as to flow copiously out from the basis of the skull as soon as the superior part was taken off. See HERM. BOERHAAVE, l. c. 1 part,

I part. p. 27. 28. 31. and 127. Also ERNEST PLATTNER, § 19. p. 41, 42. and § 17. p. 37.

2. The number, however, of those in whom collections of a watery fluid have been detected, between the *dura* and *pia mater*, surpasses the others by a great many; for, among two hundred and sixteen persons, there were one hundred and twenty who had more or less of this kind of serous fluid between these two membranes. To be more explicit, of one hundred maniacs, there were fifty-eight; of twenty-six epileptic maniacs, thirteen; of sixteen epileptic idiots, eight; of twenty epileptic patients, twelve; and of four and twenty melancholic ones, sixteen; and lastly, of thirty fatuitous patients, thirteen; in whom this phenomenon was observed to have taken place. In ten of these patients it had a red colour, and in five it appeared as yellow as saffron; and this colour had dyed the *dura mater* of a deep yellow. Three of the patients had the *dura mater* of a black violaceous colour; and it was also found in them to be very much thickened  
and

and covered with mucus. In five of these cases several parts of the membrane were ossified\*.

\* HERM. BOERHAAVE, l. c. 1 part, p. 147, 148. 150. 154. 155. and also p. 29, 30. 53, 54, 55.

3. In the longitudinal sinus, which was not examined accurately in more than one hundred patients, a number of true *polypi* were found in fifty-eight of them. Of these polyps some were of a considerable thickness and strength. In particular, however, there were among forty-two maniacs, twenty-two; among fifteen epileptic maniacs, eight; among ten epileptic idiots, seven; among twelve epileptic patients, eight; among fifteen melancholic, ten; and among six idiots, four; in whom true polyps were detected in the longitudinal sinus\*. In other respects we have to remark, that the glands of PACCHIONI have never been found so much enlarged as MECKEL describes them. Most of our dissections correspond, in other respects, with the seventh  
of



of Dr. MECKEL, and also with the eighth, in respect of the enlargement of the brain\*.

\* HERM. BOERHAAVE, loc. cit. part i. p. 141.

4. The *dura mater* was found, in some cases, to have *foramina*, or perforations, which corresponded with those of the inner table of the skull, so that the spongy bodies of the *pia mater* and substance of the brain appeared; of which more will be said hereafter. To these said spongy substances the *dura mater* was often found firmly adhering, especially under the *os frontis* and the *vertex*\*.

\* HERM. BOERHAAVE, loc. cit. part i. pag. 73. 85.

5. In some epileptic idiots there were found, on the left wing of the tentorium, near to the skull, a small protuberance of the size of a strawberry. It felt very superficial, and was covered with a strong membrane, which without doubt was an elongation of the *dura mater*.

Internally

Internally it was found to be a stony or bony excrescence, which might easily have irritated the posterior lobe of the brain; but of this there was no proof\*.

\* See *Diff. Inaug. de Epilepsia, Auct. J. C. FASCH.* Jenæ, 1686. p. 15. cap. iii. TH. WIL-  
LIS, *Opera Omnia cura GERARD BLASII*, Am-  
stelod, 1632. 4. *de Anima Brutorum*, cap. xi.  
p. 167. cap. xii. p. 179. cap. xiii. p. 187.  
HERMAN BOERHAAVE, *loc. cit.* part i. p. 53.

## V.

### OF THE PIA MATER.

IF there is any part of the human body which, in insane people, is more subject to disease than the rest, it is the *pia mater*, and *tunica arachnoides*. Three circumstances, in particular, were detected, on removing the *dura mater*, which engaged attention. 1st. A very thick, greasy, and adipose-like appearance. 2dly. A number of small, white, soft, semiglobular spongy bodies. 3dly. Se-  
veral

veral small, and, now and then, pretty considerable ossifications\*.

\* See HERM. BOERHAAVE, l. c. pag. 75. 85, 86.

2. Among one hundred maniacs, there were twenty-six, in whom the *pia mater* was thick, slimy, and of a watery blue colour; so that it had a very great resemblance to the lymphatic crust which is observed in the blood of those who labour under pleuritis. In forty-nine persons, the *pia mater* was not only slimy, but also preternaturally dense in every part. In twenty cases it was found to be less dense, and not equally so in all places; and in seventeen others, only, was it found of a tolerable degree of thinness. Fourteen only were quite free from this diseased appearance\*.

\* *Dissert. de gelatinosorum humorum corporis humani coagulatis.* Auct. HERM. BLUHM, Lipsiæ, 1767. 4.

Among

Among twenty-six epileptic maniacs, there were ten in whom the *pia mater* was preternaturally thickened and mucous; in the others it was of a natural consistence.

Among sixteen epileptic idiots, there were six in whom the *pia mater* was thick and slimy; but among the others it was in its natural state.

Of twenty purely epileptic patients, the whole of them were found to have a thickened and slimy *pia mater*, which, in some of the cases, was of a most uncommon thickness; in the rest it was only moderately so.

Of four and twenty melancholic patients, there were eighteen in whom the *pia mater* was found thickened and slimy; in the remaining sixteen it was less so.

Among thirty idiots, there were found to be twenty-two, all of whom had a thickened and slimy *pia mater*; but, in the remaining number, this appearance was much less observable.

able. Among two hundred and sixteen such people, therefore, there have been found one hundred and sixty-two, in whom the *pia mater* was greatly thickened and slimy; in some more so, however, than in others.

3. It is to be remarked, that the white, soft, and semi-globular spongy bodies, which have been already spoken of, were more common phenomena, and were also frequently met with in the heads of several of those last described. They have also been found in many, whose *pia mater* was not thickened or slimy, or of a pale blue colour.

4. The late Mr. GUNZ took notice of these spongy substances. They are to be most commonly met with on both sides of the head, especially under the forehead and crown. They are often found on the outer surface of the hemispheres of the brain, immediately under the parietal bones, and near to the temples; and they are also frequently to be observed between the hemispheres of the brain, almost as low down as the *corpus callosum*.  
They

They are found of a semi-globular shape, and commonly of the magnitude of a moderately sized pea; many, however, are as small as a grain of hemp-seed, and some still smaller than that. These spongy bodies are, at times, so copious, under the *os frontis* and the *ossa parietalia*, that they lie thick and contiguous, and often heaped on one another. When this is the case it commonly happens that the *dura mater* adheres very strongly to the *pia mater*\*.

\* See HERMAN BOERHAAVE, *loco citat.* part i. p. 89. 136. and 73. JUST G. GUNZ, *de Cerebro*, prol. ii.

5. Among one hundred maniacs, there were ninety-two in whom these spongy bodies were detected, and of these forty-two had a great quantity of them; fifty had only a moderate share of them, and in the others they were scanty. In these last they always appeared at the vertex. Eight patients only, out of the whole number, did not exhibit any signs of these excrescences. It is remarkable, that of one hundred maniacs, there were only four who

who had neither a slimy or thickened *pia mater*, or in whom none of the spongy bodies were to be found. In eight this membrane was found studded with these bodies, but, independently of this, it was not thickened or slimy.

Of twenty-six epileptic maniacs, fifteen were found in whom these spongy bodies were observed, but few of these had them in a moderate quantity.

Of sixteen epileptic idiots, there were eight who had an immense number of them, and sixteen in whom they were in small quantity.

Among twenty epileptic patients, there was not one in whom these substances were not found; in twelve of these they were very abundant, and in the remaining eight only in moderate quantity.

In thirty idiots, there were seventeen in whom the *pia mater* was much covered with these bodies, and eight in whom they were in smaller

smaller quantity. And it is remarkable, that in one person we did not meet either with these bodies, or with a thickened *pia mater*; in another, the membrane was thickened and slimy, but there were none of these bodies; and in three others the membrane was not thickened, but contained plenty of these little tumors.

6. Neither the age of the patient, or the duration of the disease, appeared to have any influence in producing either a greater or lesser number of these substances. For experience has shewn, that in comparing insane people of every age, and also those who had been long affected by it, and those who have been only a short while under its influence, some had many, and others very few; so that, hitherto, it has been impossible to lay down any rule whereby to judge of this\*.

\* J. BAPTISTI MORGAGNI *de Sedibus et Causis Morborum*, Neapoli, 1764, 4 tom. epist. viii. p. 102, where these small whitish bodies are also taken notice of. They were found in the neighbourhood of the longitudinal sinus, on the



the external surface of the *pia mater*: some were round, others oblong, and others of a very irregular shape. According to VALSALVA, they arise from the lymph; for he has seen them in the bodies of some who had wounds in the head. But these are not preternatural, as is evident by the correspondent hollows of the skull in which they lurk. Nor are these unknown to older writers, for we even find some mention made of them by VESALIUS.

7. It is quite otherwise with the ossifications which are frequently detected on the surface, as well as in the inside of these spongy bodies; and which seem to arise, and to increase in number in consequence of the long duration of the disease, especially when the bones, and particularly the ribs, begin to grow soft. In some a little roughness is all that is to be detected; in others, slight indurations; and in others, complete and extensive ossifications, together with a considerable degree of roughness\*.

\* HALLER *de Ossium Formatione in locis inflatis Corporis humani*; in *Konig. Svenska. Venten-*

*skaps Academiens Handlinger för År. 1750.*  
 vol. xi. Stockholm 8. p. 12. *et sur la Forma-*  
*tion du Cœur dans le Poulet; sur l'œil; sur la*  
*Struēture du jaune &c. première et second Memoire.*  
 Laufane, 1758, 12. p. 42. *et seq.* GERARD  
 VAN SWIETEN, l. c. tom. i. § 75. p. 110.  
 HERM. BOERHAAVE, l. c. tom. i. p. 53. 55.  
 TH. WILLIS, l. c.

8. These ossifications are generally met with in the same places as the spongy bodies themselves, namely, on the anterior surface of the anterior lobe of the cerebrum, and on the upper surface of each hemisphere, and also on the flat surfaces which lie contiguous to the falx. In no one instance we have met with ossifications in which the spongy excrescences were not also to be met with; and the more numerous these spongy bodies were, and the longer the duration of the disease, the more numerous and extensive were the ossifications. They generally have a smooth polished surface; they are convex, and are either of a round or an oval shape, and not very thick. The *dura mater* commonly adheres to their superior

superior surface, but with the *pia mater* and cineritious substance of the brain, they often form one solid mass. The inferior surface is often equal, smooth, and a little rounded; but for the most part it is rough and prickly; and many of the sharp points which issue from it sink at least the depth of two or three lines into the substance of the brain. The ossifications are not very firm, and they are for the most part friable.

9. In the heads of two hundred and sixteen, no more than twenty-four cases of ossification of this description have been detected. The most of these were maniacs, for in one hundred of these there were twenty-three such cases; in twenty-six epileptic maniacs, none; in sixteen epileptic idiots, nine, (among whom one was a somnambulist;) in twenty epileptic patients, none; in twenty-four melancholic patients, none; and in thirty idiots, eleven; in whom such ossifications were found in greater or lesser quantity.

10. Although much has been said about the atrabilious blood being found in the turgid vessels of the brain, and about its being the cause of mania and melancholy, yet it is certain, that of two hundred and sixteen dissections, not more than twenty-six were found in whom the blood-vessels were highly distended with blood. In one hundred maniacs there were not more than seventeen; in twenty-six epileptic maniacs, four; in sixteen epileptic idiots, and also in twenty epileptic patients, and twenty melancholic ones, not one; and in thirty idiots only five, in whom the vessels of the brain were full of blood. Among these there were some in whom the vessels were uncommonly distended, and contained many air bubbles\*.

\* *Historia Medica trium Morborum qui anno 1760, frequentissime in Nôfocomio mihi occurrebant, &c. Auct. JO. GER. HASENORHL, Vindob, 1761, 8. p. 93. HERM. BOERHAAVE, l. c. tom. 1. p. 128. JOH. BAPT. MORGAGNI, l. c. epist. 8. No. 9. p. 108. mentions the case of a woman under the pia mater of whom he found*

found a great quantity of serum mixed with air bubbles; a circumstance he has also often detected in others. HASENOHRL also mentions the case of a maniac, the vessels of whose brain were full of blood, and on whose *pia mater* he discovered a great number of little air bladders, which were most numerous on the right side of the head.

11. In one maniac, who had voluntarily beat his head several times with violence against the frame of the bed, the *pia mater* which covered the right hemisphere of the brain was covered with coagulated blood, and was of a dark colour, from the posterior part of the head almost to the *os frontis*\*.

\* HERM. BOERHAAVE, l. c. part i. p. 31, 32.

12. The same kind of serous fluid which is so often found between the *dura* and *pia mater*, is also met with pretty often between the last mentioned membrane and the cineritious part of the brain. In general, in one hundred maniacs, there were found twenty-eight in whom

whom there was this collection of watery fluid. In some the water appeared of a red colour, as if tinged with blood; in others it was as yellow as if it had been in infusion of saffron. In one person, several hydatids of the magnitude of a hazel nut were found; and in another, a great number of accumulations of fluid\*.

\* HERMAN BOERHAAVE, l. c. part 1. p. 87, 88.

In one person, who died apoplectic, a quantity of coagulated blood was observed lying under the *pia mater*, which seemed to have issued from some of its vessels.

In twenty-six epileptic maniacs, there were five who had a great quantity of watery fluid under the *pia mater*.

In sixteen epileptic idiots, there were three in whom a similar appearance was observed.

In

In twenty epileptic patients there were not any, but in twenty-four melancholic ones there were twelve, in whom not only a thin and clear, but also a yellow and gelatinous fluid was found under the *pia mater*.

In thirty idiots, there were nine only in whom a ferous fluid was found under the *pia mater*. One may conclude, that of eight such patients, there are certainly two who have a preternatural quantity of fluid between the *pia mater* and the brain.

## VI.

### OF THE BRAIN IN GENERAL.

1st. THAT the cortical substance of the brain is often irritated by a clear and limpid fluid, with a yellow, gelatinous, and bloody one, and also by strong concretions and ossifications, appears sufficiently from the foregoing section. In the present one, various other cases which regard the brain will be found; and especially, 1st. That in eight maniacs and  
five

five idiots there was an appearance of inflammation, 2dly, That in three maniacs, a portion of the left hemisphere of the brain, immediately below the coronal future, and at the border of the plane or internal surface of the hemisphere, was depressed at least half an inch lower than the other hemisphere, by an hydatid which lay under the *pia mater*; also, that in one melancholic person, the right hemisphere in its anterior lobe, and towards the lower part, was so much depressed by an extraordinary collection of a yellow gelatinous fluid, that it could easily have contained in its cavity half a moderately sized apple; and 3dly, in one maniac, who died apoplectic, the whole of the left hemisphere, and also the posterior lobe of the right one, and the *cerebellum* and the *medulla oblongata* were covered with blood, and were torn and distorted in various ways,

2. There is one observation which is deserving of very particular attention; in seventy-six dissections, there were nine cases in which a most unsupportable smell was emitted on opening the head; in three of these the stench,



stench was intolerable, and yet the dissection took place twelve hours only after the death of the patients; one of them was that of a person about fifty years old, who had died of apoplexy, and had the appearance of having been of a healthy and plethoric habit\*.

\* GER. VAN SWIETEN, l. c. part i. § 86. p. 123, 124. § 89. p. 130, 131. And also HERM. BOERHAAVE, part i, p. 35.

3. In particular, however, among thirty-nine maniacs, there were four in whom the brain had a foetid disagreeable smell. In five epileptic maniacs, there was one who had died of *Phthisis pulmonalis*, whose brain was equally foetid. In five epileptic patients there were two whose brain emitted a most offensive odour; and yet in one of these the death was sudden, and all the other viscera were uncorrupted, and the body itself fat and fleshy. Among four melancholic patients there was only one, and among nine idiots only one also, whose brain was of this kind. Upon the whole

whole it may be concluded, that the proportion of those whose brain is in this state, is as one to seven.

4. Although BONNETUS has asserted, in his *Sepulchret. Anatomic.* that the brain of maniacs is found to be so dry and friable, that it may almost be rubbed down into a powder; and although the celebrated RICHARD MEAD has copied this observation without having instituted any dissections whereby he might have ascertained the fact, yet experience has shewn the very reverse to be true: for, except the above-mentioned ossifications and petrifications, which have been found on the *pia mater*, and which when dry become necessarily friable, are taken for the brain itself; there is no good reason why an assertion of this kind, which stands in opposition to all experience, should have been believed. With much greater reason has the celebrated KLOECKHOF considered (although only on hypothetical grounds, and *a priori*) that these diseases were inflammations of the brain; for repeated experience has confirmed this opinion\*.

\* J. BAP. MORGAGNI, l. c. epist. 8. No. 18. p. 115. found the brain in such patients very hard, yet he does not consider this circumstance as the cause of the disease; on the contrary, he says that the brain may become hard from other causes than insanity; and that insanity may exist in many cases where the brain is not hard: for it has not only been observed by TULPIUS, KERCKRING, RING, and SCHEID, in the dissections which they have made, that the brain is soft and pulpy in such people; but the last mentioned author asserts, that this is particularly the case with those who are deprived of their senses, as also in maniacs,

5. Were it true that this dryness and friability of the brain was common, it is probable that it would have been found at least in one case in one hundred maniacs, twenty-six epileptic maniacs, sixteen epileptic idiots, twenty epileptic patients, twenty-four melancholic ones, and thirty idiots, especially as many of these had laboured twenty, thirty, and even forty years; during which time the gall must have had plenty of opportunity to have produced

duced the most extreme degree of hardness. The watery fluid, however, which has been found in such abundance under the *pia mater*, proves the contrary very sufficiently; and we actually find, among some who have died of such complaints, that the cineritious substance of the brain has been so soft and pulpy, as to allow the smallest and almost imperceptible vessels to be dragged out of it by withdrawing the *pia mater*. In most cases, however, the cineritious and medullary substance of the brain are of a good consistence. In the lateral ventricles the cineritious part is generally softer than usual; and if the fourth ventricle, which is in the cerebellum, be examined, it will be found that it is often so very soft, watery and pulpy, that it is impossible to perceive the cavity with accuracy. Now, since in dissections, those only have been remarked in whom the brain has been of a soft and watery consistence, it may be safely concluded, that in such patients the brain has not been found preternaturally dry.

6. Upon the whole experience has shewn, that of two hundred and sixteen such patients, there have been one hundred and eighteen in whom the brain was softer than usual. And as there are many unnoticed intermediate degrees of softness between the natural consistency of the brain and that degree of softness which has been remarked, it may be safely concluded, that in all those who have died of these disorders, the consistence of the brain is softer than usual.

7. Among one hundred maniacs there were fifty-one whose brains were soft, watery, and pulpy; and of these fifty-one, there were fifteen in whom these appearances were in a remarkable degree, and twenty-six in whom, although they were better in these respects, yet they were much too soft.

Among twenty-six epileptic maniacs there were eighteen, in some of whom the brain was observed to be preternaturally soft, and in others it was quite uncommonly soft, watery, and pulpy.

Among

Among sixteen epileptic idiots, there was one whose brain was a great deal too soft, and five others in whom it appeared to be so in a very uncommon degree.

In twenty epileptic patients there were eight whose brain exhibited this appearance; in one of whom it appeared to be of a very extraordinary degree of softness; and although less so in the others, yet it was still a great deal too soft.

In twenty-four melancholic patients there were nineteen in whom the substance of the brain appeared to be a great deal too soft and pulpy, and in two of them it was remarkably so.

Among thirty idiots, there were sixteen in whom the same state of brain was detected; of these there were nine in whom it was very remarkable, and in the other seven considerably so.

## VII.

## OF THE LATERAL VENTRICLES.

1. IN the ventricles of the brain the following circumstances are particularly to be alluded to: 1st. their relative size and situation; 2dly, the quantity of water which they contain; and 3dly, the state of the *plexus choroideus*; for, in insane people, a number of singularities are often to be found in these places.

2. We find, in regard to the ventricles, not only that their magnitude is different in such patients, but also that they are often disproportionate to each other in the same subject.

3. Of one hundred maniacs, there were twenty-one in whom the lateral ventricles were found preternaturally wider and larger than usual; and in eight they were quite indescribably so.

Of twenty-four melancholic patients, there were eight in whom they were found much larger than usual, and four in whom they were uncommonly large.

Of thirty idiots, there were seven in whom these ventricles were very large and long.

4. But this preternatural size does not appear to be the principal alteration which these cavities are liable to; especially as a much greater number of insane are found in whom the lateral ventricles are either smaller, shorter, or narrower than usual.

5. For in one hundred maniacs, there were thirty-four in whom the lateral ventricles were very small, narrow and short, and four in whom they were remarkably so.

Among twenty-six epileptic maniacs there were nine in whom they were very small, short and contracted, and which did not contain a drop of fluid.



Among twenty epileptic patients, there were four in whom the lateral ventricles were found to be very small.

Among twenty-four melancholic patients there were twelve, and of thirty idiots there were ten, in whom a similar appearance was detected.

6. Independently of all this, a great disproportion is often observed between the size of the lateral ventricles of the same subject; for it has been found that, in ten maniacs and three idiots, the left ventricle has been much larger than the right; and, on the other hand, in seven maniacs and four epileptic maniacs, the right ventricle appeared to be much larger than the left. In some maniacs the left ventricle was much higher than the right; and, on the other hand, in six other maniacs the left was at least a quarter of an inch lower than the right.

7. In regard to the greater or smaller quantity of fluid which has been found in these

cavities, experience has demonstrated the following facts. In six maniacs they were found uncommonly full, and in twenty-three they were ready to burst: in one of these, who had died of apoplexy, the left ventricle was quite full of coagulated blood. In eight maniacs they were moderately full, and in eleven people, who had also been affected with mania, they were found to be quite empty. Of ten other maniacs, there were five in whom the right ventricle was found to be quite full, and the left only moderately so; and, on the other hand, there were four in whom the left ventricle was found quite full, and the right one almost empty. In five others, the right ventricle was empty, and the left one only moderately full.

Of twenty-six epileptic maniacs, there were thirteen in whom both ventricles were quite distended with fluid, and five others in whom these cavities were very full.

Of sixteen epileptic idiots, there were three in whom both cavities were quite empty; in  
four,

four, the right ventricle was empty, and the left moderately full of a serous fluid. On the other hand, the right ventricle was found, in one case, to be uncommonly distended, and the left ventricle only moderately full. In another, the right ventricle was moderately full, and the left quite empty.

Among twenty epileptic patients there were nine in whom both ventricles were found uncommonly distended with water. In two others they were only moderately so, and in one case they were quite empty. In four others the right ventricle was found quite empty, and the left full of a clear watery fluid.

Of twenty-four melancholic patients, there were ten in whom both ventricles were found astonishingly distended with water, and also two others in whom they were uncommonly full and of a very large capacity. In two others they were quite full, and in five they were observed to be empty. In the rest the right ventricle was found quite full, and the left only moderately so.

Of thirty idiots, there were fourteen in whom both ventricles were amazingly distended with fluid: in this number, however, one was included who died of apoplexy, in whom both ventricles were found full of blood. In four others the ventricles were moderately distended; in three others they were quite empty, in four more the right one was greatly distended, and the left one only moderately full; and in four others the left was moderately full, and the right one almost empty.

8. It was not easy to determine the true quantity of the water which was contained in any one cavity. But it may be safely asserted, that, in eight patients of this description, each ventricle contained a tea-cup full, or from three to four ounces.

It is remarkable, that when little or no water is contained in these cavities, there is no mark of any opening from the lateral ventricles into the third ventricle, but the inferior surface of the anterior edge of the *commisura anterior* lies immediately in both cavities, on the medullary substance

substance which is underneath, immediately adjoining to the *corpora striata*, and appears to be covered with a fine membrane which lines the ventricles. But when these cavities are filled with water, and distended in every way, it is raised up so much that the membrane at last gives way. Hence we find, in the heads of those in whom the cavities are only slightly distended, that, according to the bulk of these cavities, there is an opening of two, three, four, five, or six lines in length; which has the same kind of appearance as if the eyelids were only opened a little way. When the lateral ventricles are more distended this opening appears of an oval shape; and if they are fully distended it appears quite circular. This opening has always been found when water was present. The smallest circular opening is able to admit a moderate sized pea, but some are considerably larger. Through this opening the water of the lateral ventricles could flow freely into the third one.

9. Among two hundred and sixteen cases, there were not more than sixteen in whom the

*plexus*

*plexus choroides* was in a perfect or nearly natural state. Three of these were maniacs, three others were epileptic maniacs, three others epileptic idiots, and the six remaining ones idiots. In the other two hundred this body was very much discoloured, thick, swollen, hard, and full of hydatids\*.

\* See HERM. BOERHAAVE, l. c. p. 112. 116.

In ninety-six maniacs the *plexus choroides* was spoilt throughout; it was thick, swollen, and full of hydatids, which were of different sizes, from that of a large sugar pea down to the smallest grain pearls; and, in general, it was as thick as a bean at its edges. In eleven of these unhappy people the *plexus* was very thick and swollen; but there were no hydatids in it. In fifteen others a number of ossifications and petrifications were detected, independently of hydatids, which were also observed. In four of these, indeed, no hydatids appeared, but in their place a singular kind of aqueduct was to be seen. In five maniacs the  
*plexus*

*plexus* was found quite hard and scirrhus; and in sixteen others it was thick and swollen, and studded with innumerable hydatids; in eight others the same bodies were observed, but not in such size. In the remaining thirty-seven maniacs the *plexus* was only moderately swollen\*.

\* See HERMAN BOERHAAVE, l. c. part i. pag. 155. GER. VAN. SWIETEN, l. c. tom. i. p. 165. et seq. *Oeuvres Anatomiques de M. DUVERNAY*, Paris, 1761, tom. i. p. 41. who does not think that there are any glands in the *plexus*, but who thinks that the vessels which are distributed through the cellular membrane, and which he compares with small-pox, are swelled into the nature and shape of hydatids. *Duæ Relationes de Morbis singularibus*, a CL. JOHNSTONE, CL. FOTHERGILL *communicatæ*, in *Medical Observations and Inquiries*, Vol. ii. 1762. 8. p. 115. where it is mentioned, that in one dissection half an ounce of water was found in the ventricle of the brain, and also a moderately large hydatid adhering to the *plexus*.

Among

Among twenty-three epileptic maniacs there were seventeen who had innumerable hydatids in both ventricles; in the others the *plexus* was very thick, swollen, and cartilaginous.

In sixteen epileptic idiots there were six in whom there were only a few hydatids; in two there were many; and in the remaining number there was a considerable number of these bodies.

Among twenty epileptic patients the *plexus choroides* was somewhat swollen, and of a dark red colour; in five it was thick, swollen, and hard; in four it was moderately swollen; and in the remaining number very much swollen, and studded with hydatids.

Among twenty-four melancholic patients there were fourteen in whom the *plexus* was swollen and full of hydatids; in the remaining number, however, these bodies were in much greater number.

Among



Among twenty-four idiots there were ten, all of whom had thick and swollen *plexus*; in the remaining number it was not only thick and swollen, but also contained a number of hydatids.

In some this body could only be examined in one side, because it was covered with coagulated blood in the other. In some it was apparent only in the right side, in others in the left.

## VIII.

### OF THE THIRD VENTRICLE.

1. THE third ventricle is, in such people, of the same nature as the lateral ventricles. In some it is large, in others small; sometimes quite full of water, at other times only moderately distended; and in many cases it is quite empty. Of all which we shall speak more fully.

2. In

2. In regard to the size, we have found it of a most extraordinary large capacity in twenty-four maniacs out of an hundred. On the other hand, in sixteen of this number it was quite small, narrow, and short; and in four others uncommonly narrow and short.

In twenty-six epileptic maniacs this ventricle had its natural appearance, but in eight others it was uncommonly short.

In sixteen epileptic idiots it did not appear to be larger than common, in any remarkable degree; in three it was too narrow; and in four it was shaped like an irregular triangle; so that it became very acute in its exterior part, near to the *infundibulum*; and in respect to the opposite side, it was too wide.

In twenty epileptic patients there were four in whom this cavity was too large. In none of them was it discovered to be too small.

In

In twenty-four melancholic patients this ventricle was too large. In all the others it was of a natural size.

In thirty idiots there were five in whom it was tolerably wide, four in whom it was very capacious, and six in whom it was too narrow.

3. As to the fluid contained in this cavity, it has been found that, among one hundred maniacs, there were fifty-seven in whom the third ventricle was quite full; twenty in whom it was moderately so, fifteen in whom it contained very little, and in the remainder it was quite empty.

In twenty-six epileptic maniacs this cavity was found quite distended with fluid.

In sixteen epileptic idiots there were four in whom it was full of water; in three it was moderately full, and in the rest it was almost empty.

In

In twenty epileptic patients there were six in whom this cavity was full of water; in three others it was moderately full; and in the others there was either a very small quantity of fluid, or else it was quite empty.

In twenty-four melancholic patients, there were sixteen in whom this cavity was quite full of water, and eight in whom it was empty.

In thirty idiots there were fourteen in whom this ventricle was found quite full of water; in ten it was moderately full; and in six it either contained very little fluid, or else was quite empty.

It may be remarked here, that in four people who had died apoplectic, the fluid which was contained in this cavity appeared quite red: In two, the *plexus* of vessels which covers the pineal gland was quite black with extravasated blood; and in two others it was of a deep red colour.

## IX.

## OF THE PINEAL GLAND.

IN a number of cases the pineal gland is found quite covered with water.

In one hundred cases of mania there were thirty-four in whom this appearance was observed.

In twenty-six epileptic maniacs there were eight in whom it was found covered with water.

In sixteen epileptic idiots there were seven in whom it could not be seen for the serum which surrounded it.

In twenty epileptic patients there were ten in whom the gland was equally concealed.

In twenty-four melancholic patients there were twelve in whom it could hardly be discerned

cerned for the watery fluid which covered it.

In thirty idiots there were nine in whom the gland was also covered with a watery fluid.

2. In regard to the magnitude of this gland, it has been found, that in the bodies of one hundred persons, who died maniacal, there were forty-six in whom it was of its natural dimensions; in thirty-seven it was much larger than usual, and in seventeen it was much smaller.

What is very remarkable, however, is, that in four cases it was found as large as a cherry, and in two as big as a hazel nut; and at the same time it was covered with small hydatids. On the other hand, in three cases it was discerned to be uncommonly small.

In twenty-six epileptic maniacs this gland was of its natural size, if we except eight in whom it was very long and slender.

In sixteen epileptic idiots there were eight in whom it was found to be of its natural size; in two it was larger, and in four smaller than usual.

In twenty epileptic patients the magnitude of the pineal gland was quite natural.

In twenty-four melancholic patients there were only four in whom it was of its natural shape and size: in all the others it was larger than it ought to have been.

In thirty idiots there were twelve in whom the gland was quite natural; in twelve others it was larger than common, and in the others smaller than common.

3. As to the consistence of the pineal gland, there were twelve people, in a hundred cases of mania, in whom it was harder and more tenacious than natural. In fourteen others it was found to be quite soft and watery. It is, moreover, to be remarked, that in four patients it had the shape of a compressed cylinder,

der, and was furrounded with three ridges, and appeared as if it had three grooves.

In two cases this gland had the form of a heart; in three cases it was long and thin; and in one case quite sharp-pointed.

In sixteen idiots there were four in whom it was too soft, and three in whom it was too hard; in one of whom it dissolved like water when rubbed.

In twenty epileptic patients there were five in whom the gland was too soft.

In twenty-four melancholic patients there were four in whom it was too hard, and four others in whom it was too soft.

In thirty idiots there were six in whom this small body was somewhat too hard, and in ten others it was too soft, approaching almost to a degree of fluidity.

In



4. In regard to the sand and stony concretions which are so frequently found in this gland, and concerning which the late Dr. GUNZ has proposed the following question; namely, Whether they were not to be found in every case of mania, and were not the cause of the disease? experience has shewn us the following facts\*.

\* See *Anatomische Beobachtungen iiber die Steine, welche in verschiedenen theilen des menschlichen Koipers gefunden werden von MECKEL (Histoire de l'Academie Royale des Sciences, &c. Berlin, 4to. pag. 92.)* In which the author says; that there is hardly any part of the human body in which such substances have not been found. The substance of the brain itself, which may be considered as the softest and most delicate part of the whole human frame, is not exempt from this. He does not, however, adopt the opinion of Mr. GUNZ; because, upon examining the heads of four patients who had died melancholic, he had found three in whom the gland was quite fresh and found. And although, in the fourth, he discovered a stone of a tolerably large size, which

in its texture resembled a blood-stone, and which was situated in the posterior lobe of the left hemisphere of the brain, behind the pineal gland, yet he had often seen upon former occasions, similar stony concretions in the pineal gland of people who were in good health.

5. In one hundred maniacs there were fifty-two, and consequently more than the half, in whom either one stony concretion, or else several, were detected. These were larger and smaller, and round and angular, in different cases. In some a considerable quantity of sand, also, has been discovered.

In twenty-six epileptic maniacs, there were three who had one very large stony concretion in this gland; five who had one of a moderate dimension and pointed form; and four in whom two such stones were detected.

In sixteen epileptic idiots, there were three in whom a single small stony concretion was found.

In

In twenty purely epileptic patients, there were four in whom one little stone was detected in the pineal gland; in three others, however, there were from twenty to thirty.

In twenty-four melancholic patients, there were six people in whom very few concretions of this nature were to be found; but seven others in whom the particles of sand were numerous.

In thirty idiots, there were nineteen in whom several stony concretions were found in the pineal gland; some of whom had nearly thirty particles of sand each.

6. Although in all the bodies which were examined after death, the dissection was not conducted with that degree of care which is bestowed in other cases, yet it was sufficiently so to discover many other singularities in different parts of the body. For instance, we found in one epileptic patient the *nates* very large, and in one maniac, the *testes* very small. In an epileptic maniac the *nates* were very much

compressed and flat, and the *testes*, especially the right one, in a natural state. In a maniac, who had died apoplectic, these bodies were covered with blood; and in the case of an epileptic maniac, in whom they were very soft, they lay so deep that they were quite covered by the *cerebellum*, and were not discovered until we reached the fourth ventricle. In one epileptic maniac the *corpora quadrigemina* were very flat, soft, and almost imperceptible; and in one idiot they were remarkably flat, soft, and small: but in one maniac they were so flat and soft, that the left *testes* could hardly be known. In one epileptic idiot, (who was a somnambulist, and constantly looked upwards) the *testes* were the smallest of any we had yet seen; and in their interstices the great lobe of the brain was so distant from the fourth ventricle, that it did not cover it, but left it quite exposed.

7. In one maniac the *infundibulum* was closed at its entrance into the fourth ventricle with a strong membrane. In three epileptic maniacs the *commissura cerebri anterior* was quite

quite wanting, except a coalescence of the *thalami nervorum opticorum*, which was about a line's breadth and a little below the place where the *commissura* ought to have been, was mistaken for it. In one maniac, and in one epileptic patient, the *commissura* was nearly half an inch in thickness.

8. The *thalami nervorum opticorum* were, in one case of mania, found to have adhered. In two epileptic maniacs, two small *thalami* were found to be separate at their superior part; but towards the middle they adhered to a cineritious substance, which lay so near to the *corpora striata* that they all seemed to be blended together. In two idiots they were very small, and stood wide from one another. In one idiot, at the pointed part of the *thalamus* of both sides, there was a medullary prominence half as big as a pea, which projected beyond the surface of the *thalamus*. In one maniac the *thalami nervorum opticorum* stood more contiguous to the *corpora striata* than had ever before been observed\*.

\* DUVERNEY, l. c. part 1. p. 41. mentions his having frequently seen, in dead bodies, oval and roundish eminences on the *thalami* of the optic nerves.

9. Before we leave this part of the brain there is a remarkable circumstance which deserves notice. A man who had laboured under an acute disorder, when he was about thirty-three years of age, soon afterwards became insane, and soon died. On opening his head there was found, in the medullary part of the right side of the brain, near where the medulla of the two hemispheres join to form the *centrum ovale*, a brownish, red-coloured spot of the size of a sixpenny piece, which had the appearance of a split fig or spoilt pear. This spot was much softer than any other part of the brain, and was so deep that it reached to the basis of the brain. The shape which it had, at that part, was that of a small oval, the longest diameter of which was two inches in length, and the short one was one inch. It was elevated in the form of a round ball, about two inches high. The nearer it reached

reached the basis of the brain the broader and larger, and the redder it was. It did not contain any matter, nor did it emit any disagreeable smell. Was this appearance from birth; or a metastasis from previous disease?

## X.

## OF THE CEREBELLUM IN GENERAL.

EVERY thing which has been said of the brain in general may also be said of the *cerebellum*, except that spongy excrescences, ossifications, and petrifications, have never been once met with. The *cerebellum*, as has been already observed, is commonly much softer, pulpy, and more watery than the brain\*. But the membranes which envelope it, especially the *pia mater* and the *tunica arachnoidea*, are seldom found so much thickened, mucous, and discoloured as in those which cover the brain. In the heads of these maniacs, however, these membranes were discovered to be thick and mucous, and studded with hydatids of the size of a pea, not only on the *cerebellum*,  
but

but also on the *medulla spinalis*. In two people, who had died apoplectic, the *cerebellum*, the *medulla oblongata*, and the *medulla dorsalis*, were found coated with coagulated blood. In two others, who to all appearance had died apoplectic, during an attack of epilepsy, the *pia mater* was discoloured with blood, for the extent of an inch in length and two or three lines broad, at that place which covers that portion of the right wing of the *cerebellum* where that body joins the *medulla oblongata*.

\* GERARD. VAN SWIETEN, l. c. part i. § 112. p. 164. and § 170. No. 1. p. 250. § 267. p. 434. says the *cerebellum* is always much more solid than the *cerebrum*; and this is the very contrary of what usually happens.

2. In all those cases in which the brain has a foetid offensive smell, the *cerebellum* is found to partake of the same disorder. This was found to be universally the case with all those who have been already mentioned.

3. All



3. All maniacs, whose brain was found to be preternaturally soft, have had, as experience has shewn, a still softer *cerebellum*.

Independently of the two epileptic maniacs already mentioned, there were twelve others who had an uncommonly soft, watery, and very small *cerebellum*.

In fourteen epileptic idiots there were five in whom the *cerebellum* was found to be too soft.

In twenty epileptic patients there was not one in whom the *cerebellum* was not found to be much softer and smaller than usual.

In every case of melancholy and idiotism which, as has been already taken notice of, there was any preternatural softness of brain, there was also a preternaturally soft *cerebellum*.

## XI.

## OF THE FOURTH VENTRICLE.

AS the fourth ventricle is naturally very small, so in no instance have we found it preternaturally so. In six maniacs and one epileptic patient it was natural, and in all the rest it was too wide. In some cases, even where no water was present, it has been found to be so wide as to admit the little finger easily. In other cases, in which it was filled with water, the thumb would not have filled it completely; and although the quantity of water which this cavity naturally contains is not to be accurately ascertained, still it is certain that, in some cases, it measured half an ounce, and in others a whole one.

In an hundred maniacs, there were eighty in whom the fourth ventricle was so much distended with water, as to be ready to burst; some in whom it was immoderately distended; and, on the other hand, only three in whom it  
was

was quite empty. In the rest this ventricle contained only a little water; and in one, who died apoplectic, it was found full of blood.

In twenty-six epileptic maniacs, this cavity was found immoderately distended; in four it was moderately so; and in five others it was wide, but did not contain any fluid.

In sixteen epileptic idiots, there were six cases in which it was found immoderately full; in the others it contained only a little water.

In twenty epileptic patients, there were eleven in whom it appeared completely distended, and nine in whom there was little or no water.

In twenty-four maniacs there was not one in whom it was not found completely distended with water.

In thirty idiots, there were twenty-four in whom it was quite full; and in one of these, who had died apoplectic, it was filled with a  
bloody

bloody serum; but in the rest there was no fluid.

Before taking our leave of the *cerebellum* and fourth ventricle, there is a very particular case which deserves to be mentioned. The third ventricle was quite preternaturally constructed, as has been already observed; toward the *infundibulum* it was very narrow; and at the opposite extremity, near to the *corpora quadrigemina*, it was at least once as wide as it ought to have been, and so dilated that it resembled a common triangle. The *corpora quadrigemina* lay very profound; the *testes* were very small; in the middle interstice of these bodies, the extremity of the great lobe of the brain was so distant from the fourth ventricle, that it was quite exposed. From between each *testis*, or rather from the medullary substance to which they adhered, a medullary chord was sent; these were each as thick as a common quill. They took a direction towards the great lobe of the brain; where they descended, and kept along the brain and around the fourth ventricle. They were so twisted round

round each other, as they furrounded the ventricle, that it was impossible to say where they terminated. In another case the great lobe was entirely wanting; and in its place was a thick medullary chord, which formed the posterior part of the fourth ventricle, by which means it was much wider and higher, and was immediately connected with the third ventricle.

## XII.

### OF THE GLANDULA PITUITARIA.

1. THE examination of this substance, in the first thirty bodies which were opened, was not very careful; but in the remaining hundred and ninety-seven it was accurately investigated.

2. As the natural size of this gland is about that of an ordinary-sized bean, so every one which was larger is called bigger, and every one which was less is called smaller than usual.

3. Ac-

3. Accordingly, of seventy-four maniacs, there were fifty-four in whom the pituitary gland was natural; in twelve it was found to be large, and in eight small.

In twenty-two epileptic maniacs there were fifteen in whom this gland was of its usual bulk; in five others it was larger than usual.

In twelve epileptic idiots this gland was too small; in the others it was quite natural,

In twenty epileptic patients the pituitary gland was in a natural state.

In twenty-two melancholic patients, there were eight in whom it was found to be too large; in the others it was of its natural size.

In twenty-nine idiots, there were five in whom it was large; in the others it was of its usual magnitude.

4. In

4. In seventy-four maniacs there were only twenty-five in whom the gland had its natural consistency; on the other hand, it was found to be too hard in thirty-seven instances, and in twelve it was too soft.

In twenty-two epileptic maniacs, there were nine in whom it was too hard, and eight in whom it was too soft.

In twelve epileptic idiots, there were six in whom this gland was greatly too hard; and in the remaining fifteen it was natural.

In twenty-two melancholic patients, there were twelve in whom it was too soft; in six it was of a natural consistence, and in all the rest it was too hard.

5. It appears then, that in all these diseases the *cerebrum* and *cerebellum* had a great tendency to become softer than usual; and the pituitary gland, on the other hand, to become harder.

## XIII.

## OF THE BASIS OF THE SKULL.

1. AS it is impossible, in cases such as those which have been described, to attend to every minute deviation of structure which may occur, so it is our intention, at present, to take notice of those only which are most remarkable. The greatest number are to be met with in the neighbourhood of the *sella turcica*, especially behind the *processus clinoidei*\*.

\* HERM. BOERHAAVE, l. c. part 1. p. 7.

2. They are frequently met with much longer than usual, and are so sharp and pointed as to give reason to fear that they might have lacerated the brain; but no such appearance is ever found.

3. This immense elongation of the posterior clinoid processes is not always equal on both sides,



sides, for the right is often sharper and higher than the left; and sometimes, also, the contrary takes place. In one maniac a preternatural process, of considerable length, arose from between the two clinoid processes.

4. Among one hundred maniacs, there were thirty-four in whom this sharp-pointed elongation of the posterior clinoid processes was observed. In some it was found equally elongated on both sides; in others it was only so on one; and in some others, there were sharp processes issuing from between the two.

In twenty-six epileptic maniacs, there were eight in whom this process was sharp and pointed; and in one of these there was a small upright process, as sharp as a needle, which arose from the basis of the skull, just where the middle lobe of the right hemisphere lies.

The same phenomenon was observed in two strong-made epileptic persons. In three idiots, the clinoid processes were thin and friable, and in four epileptic patients they were quite

moveable. In two maniacs the *crysta galli* was quite moveable, but no other preternatural appearance was to be seen in it,

In one maniac the *os petrosum* of the temporal bone of the right side was much larger and higher than the left,

In six maniacs the *sella turcica* was deep and flat, and the space between it and the *crysta galli* was quite level; so that the inferior surface of the anterior lobe of the brain had not the smallest curvature, as it usually has.

In four maniacs, a hard glandular substance, of the size of a small pea, was found on the left side, about an inch from the *sella turcica*: and in three others a similar body, of the size of a raspberry, was found situated between the *crysta galli* and *sella turcica*. All these bodies were of a white colour, and adhered to the skull; and yet, on removing them, no preternatural appearance was found, either on the bone, or on the *dura mater*\*,

\* HERMAN BOERHAAVE, l. c. part i. p. 69.

In two maniacs there was found a hard reddish-coloured glandular substance, of the size of a Spanish nut. It adhered to the left and anterior side of the *sella turcica*, and rose up above it.

N. B. *In the original Mr. GREDING gives a description of the appearances of the viscera of the thorax. But as there is not one observation which seems to be of the smallest importance, it has been deemed unnecessary to translate it. It were much to be wished, that the viscera of the abdomen had been examined with the same degree of care; especially in cases of hypochondriasis and melancholia of long standing.*

## N O T E S

REFERRED TO

IN THE WORK.

No. I.

(Vide Vol. I. p. 3.)

“CORDIS pulsatio, nec sensu peragitur, nec variatur. Fibræ cordis virtute micationis vitalis sanguinis in ejus ventriculis contenti, per vices irritatæ, excitantur ad se contrahendas et pulsationem faciunt; mox irritatione remissâ relaxantur et naturalem positionem repetunt.” GLYSSON, *De Ventriculo et Intestinis*. p. 148. § 3.

In another part he continues thus. “Negari non potest evidentem hîc fieri fibrarum irritationem. Secundum hunc enim, rythmus pulsationis

sationis variatur, ut ex pulsum differentiis in febribus et aliis morbis constet. Neque quidem fas est hic causari fibrarum sensationem: Siquidem hæc irritationis per vices perceptio, æque inter dormiendum quo tempore sensus feriantur, ac inter vigilandum exercitur. Non ergo perceptione sensitivâ in his actionibus aut naturali irritationem vitalis sanguinis percipiunt, et ad se vigorandas et per vices remittendas animantur. Idem corroboratur in motu tumultuoso animalium persistente, decollatis earum capitibus. Similiter intestina adhuc calentia in abdomine recens aperto si varii motuant et intorquant. Fibræ musculorum in animalibus defunctis, acribus, et pungentibus liquoribus tactæ se contrahunt. Quid opus est pluribus? Hinc satis certò inferre licet fibras absque sensuum auxilio posse irritationem percipere et conformiter se movere."

## No. II.

(Vide Vol. I. p. 12.)

The laws of irritability, as established by FONTANA, in his *Recherche Philosophiques sopra la Fisica Animale*, tom. i. are as follow:

*Legge 1.* Ad ogni contrazione della fibra è sempre necessario un nuovo stimulo che ne risvegli l'irritabilità.

*Legge 2.* L'irritabilità non è sempre costante, ma sola dopo un qualche tempo ritorna al muscolo, secondo l'indole e lo stato delle sue fibre.

*Legge 3.* Il muscolo contratto per lungo tempo perde l'irritabilità.

*Legge 4.* Il muscolo distratto o compressi per lungo tempo perde l'irritabilità.

*Legge 5.* Il muscolo che lungamente sta rilassato perde l'irritabilità.

No.

## No. III.

(Vide Vol. I. p. 230.)

Id magis difficile videtur explicatu, quomodo animalia absque encephalo vivant, siue id subito destructum fuerit siue lento malo sublatum.

Et primum vulgare est in animalibus de insectorum genere, (*a*) et in frigidi sanguinis quadrupedibus (*b*) capite resecto vivere ea animalia, currere (*c*) et clamare, (*d*) et cibum quærere, (*e*) et venerem exercere, (*f*) et de hostibus vindictam sumere (*g*) etiam a plusculis diebus. Vide HALLERI *Elem. Phys.* t. iv. p. 352.

(*a*) *Capita resecto crabones vivunt*, Purchas of the Bees, p. 186. *Vespæ*, Woodward Suppl. p. 93. 97. *Muscæ*, id. p. 92. *Erucae*, Zimmermann, p. 21. *Scarabei*, Physique des Animaux, p. 254. *Gryllotalpæ*, Jaccobæus, p. 103. *Locustæ*. Trauner, p. 29. (*b*) *Lacerti*, Vandelii Epistolæ ii. p. 243. Tachard Voyage de Siam, tom. ii. p. 254. *Ranæ*, Whytt. Phys. Essays,

Effays, p. 214. Zimmermann, Woodward, Redi, &c. (c) *Muscæ*, Woodward. *Ranæ*, Zimmermann, Borellus. (d) *Ranæ*, Zimmermann, Woodward. (e) *Vermes*, Bonnet Insectol. t. ii. p. 94. (f) *Muscæ etiam ova ponunt*, Boyle de Util. Phys. Exp. p. 116. Redi Insectol. p. 81. 82. (g) *Vespæ*, l. c. *Vespæ et Papiliones*, Philosoph. Transact.

## No. IV.

(Vide Vol. II. p. 10.)

(*Extracted from the American Transactions,*  
Vol. i. p. 198.)

“ A child, three years old, was seized with infanity, or rather idiotism, suddenly, without the smallest degree of fever, or any other complaint to account for so strange an affection. The parents were greatly alarmed, and sent for me; I arrived when the child had been a few hours in this condition, examined it very closely, found its pulse moderate and natural, no preternatural heat or flushing, no thirst, tongue clean, no internal function whatever disturbed, but those of the brain; the child  
was



was to all appearance happy, talking all the incoherent nonsense that can be imagined, laughing, and in constant motion; but laboured under so great a debility, that it could not stand or walk without tottering; and several times in attempting it fell down; it was a perfect *delirium mite*. I had fortunately seen several such cases from eating the seeds of the *Datura Stramonium*, or thorn-apple, in Philadelphia, which made a considerable impression upon me. Persuaded that the case before me was another of the same kind, I questioned the parents strictly, if the child had not been eating something improper; they answered confidently in the negative; I still expressed my doubts, and at last told them positively it had been taking some of the above apple; they were surprised at my obstinacy, and declared none grew near the house. I immediately gave it a large dose of tartar emetic, recollecting that, in the former cases, there had been a great insensibility of the stomach; this not proving sufficient, and the child taking no medicine, with reluctance I introduced a funnel into the mouth, and forced down a great quantity

quantity of warm water, which had the desired effect. The matter was now determined; I was highly gratified, and the by-standers all astonished, at the sight of a table spoonful of seeds and the thorny covering. The child, after this, improved rapidly, and in a few days was perfectly recovered."

In like manner various other narcotic remedies, as they are commonly called, produce delirium. SAUVAGES has given a very good catalogue of these. The *hyoscyamus niger*, the *conium maculatum*, and the *Atropa Belladonna*, all produce similar effects when taken in a certain quantity.

See SAUVAGESII *Method. Medend.* tom. ii. p. 141. et seq,

In the *Histor. Mirab.* of FRITISH, part ii, Hist. 6. there is a singular account of the effects of the seed of the *Datum Stramonium*. A quantity of it was eaten by a number of the servants of a Baron de Salvador, all of whom were affected with a mild delirium. The same

same author, Hist. 8. mentions the case of two monks, who became delirious in consequence of having eaten a quantity of the root of the hemlock. They both of them imagined they were metamorphosed into ducks, and consequently threw themselves into the river!

No. V.

(Vide Vol. II. p. 17.)

*Power of the Imagination in altering the natural Operation of Medicines.*

PECHLIN relates the following very singular histories concerning the powers of the imagination in altering the impressions of medicines.

“ A student, of a phlegmatic habit, and not possessed of a great deal of mother wit, once applied to me for advice. He complained of loss of appetite, obstinate costiveness, and of being almost suffocated in the morning by

by glairy mucous. After I had relieved his bowels, by means of a glyster, I ordered him fifteen grains of white vitriol with a little cream of tartar, in order to extricate the *pitu-ita* from his stomach. He followed my advice, but, by a preposterous conceit, persuaded himself that the powder was intended as a sweat; and, accordingly, after he had swallowed it, he covered himself all over with the bed-cloaths, and fell into a profuse perspiration. He then came to thank me, and tell me that the powder had been attended with the desired success. I no sooner heard of a sweat, than, full of wonder, I asked him if he had taken any other remedy than the one I ordered him. He assured me he had not, but that he thought the powder which I prescribed for him was to sweat him; which effect he therefore expected, and which had been effectually accomplished. But I recollect another case, of the same kind, more remarkable than this. There was a student of my acquaintance, at Leyden, who either because I was too young, or because he wished to save his money, did not consult me, but took care of his own health.

health. He had, probably, heard medical men assert, that purgatives were the best kinds of remedies, and that pills were the best form for giving them. As he had been told that FERNELIUS was an author of great reputation, he borrowed him of me. I sent it to him. He looked in the index for the word pill, and as he imagined that all pills were purges, he took the first as the best. These were the *pil. Cynoglossi*, the dose  $\mathfrak{z}$  which he swallowed; and, after drinking two or three glasses of warm beer, waited the effect: and lo! it took place agreeably to the imagination; and he was thus purged by opium, hyosciamus, crocus, and other anodynes and astringents. Lib. 3. Obs. xiii.

*Force of Imagination.*

THE three following cases are brought forward solely with the view of shewing how the judgment yields, and how the body is affected by representations when they are of a certain degree of strength. It would have been a  
very

very easy matter to have introduced a great number of such cases, for they are by no means uncommon, but no new light would have arisen from this; and those which are here adduced are, therefore, supposed to be sufficient for explaining the fact.

A youth was tempted, one day in Spring, to bathe himself in fresh water, just about the period when the frogs begin to spawn. He dived several times, and, on coming out of the water, observed the spawn of the frogs. He immediately imagined he must have swallowed some of it; and this idea made so strong an impression on his mind, that he afterwards believed young frogs were generated in his stomach and intestines, which lived on the meat and drink he swallowed. Some years afterwards he began to study medicine, probably with the view of curing himself. He prosecuted his studies with assiduity for seven years; and after having travelled through Germany, Italy, and Switzerland, he obtained his degrees with much applause. Many were the remedies he tried to kill and expell his imaginary

nary frogs; and, wherever he went, he consulted the first physicians of the place on his case.

On his return from Italy, in the year 1609, he committed his health to my care. I endeavoured to convince him that his complaint was mere flatulency, and that the sudden propulsion of the wind, from one part of the intestines to the other, occasioned the noise. He argued strongly against this opinion, and tried to persuade me that it was not wind, but the voice of real frogs which he heard. He argued himself into a great passion in my presence, and asked me if I did not hear the frogs croak? He contended, also, that the presence of the frog was demonstrated by its movements in the stomach; for when it was hungry it moved and jumped about, and was never still until it was fed. I thought of giving him a purge, and of causing a live frog to be put into the close stool, in order to free him from his conceit. But, as he was well acquainted with medicine, he was full as cunning as myself.

He

He requested I would order him such remedies as were efficacious in killing insects, worms, serpents and toads. But, although I obeyed his request in this, and gave him such remedies for upwards of a quarter of a year, no frog appeared. I was at last tired, and told him his error in as strong language as I could; endeavouring to convince him, by argument, that if a frog had got into his stomach it could not live. He began, at last, to be convinced of the error he was in, and thanked me for my pains.

PLATERI, *Obs.* lib. i. p. 43.

It is asserted by LUCIAN, that when ARCHLAUS, a celebrated Greek actor, performed the part of Andromeda, in a tragedy of Euripides, several of the spectators (Abderites) were seized with delirium; some at the time of performance, others a day or two afterwards. During this delirium, they did nothing but declaim in a theatrical manner, and greatly lamented the fate of Andromeda.—



VAN SWIETEN in *Boerhaave Comment.* tom. ii.  
p. 592.

That such an effect might be produced on a people, whose imagination so greatly surpassed their judgment as that of the Abderites, is not unlikely. They are reported to have been a people of weak mind, and extremely superstitious. I have seen instances, several times, in this country, of ladies being carried out of the theatre in an hysterical delirium, when Mrs. Siddons has played Isabella.

## VI.

(Vide Vol. II. p. 45.)

In Butler's *Lives of the Saints*, Vol. for the month of October, there is a full account of *Sancta Teresa*; but which, from being unnecessarily prolix, is too long to be inserted here.

The following one I have copied from my friend Mr. TOWNSEND'S *Tour through Spain*,  
Vol.

Vol. 2. p. 100. It is extracted from BUTLER'S Work, and is done with spirit and judgment.

“ The life of S. TERESA, lately published among those of other saints, by the Rev. A. BUTLER, is peculiarly interesting. Her frame was naturally delicate, her imagination lively, and her mind, incapable of being fixed by trivial objects, turned with avidity to those which religion offered, the moment they were presented to her view. But unfortunately meeting with the writings of St. JEROM, she became enamoured of the monastic life, and quitting the line for which nature designed her, she renounced the most endearing ties, and bound herself by the irrevocable vow. Deep melancholy then seized on her, and increased to such a degree, that for many days she lay both motionless and senseless, like one who is in a trance. Her tender frame, thus shaken, prepared her for extasies and visions, such as it might appear invidious to repeat, were they not related by herself, and by her greatest admirers. She tells us, that in the fervour of her devotion, she not only became insensi-

insensible to every thing around her, but that her body was often lifted up from the earth, although she endeavoured to resist the motion; and Bishop YEPEZ relates in particular, that when she was going to receive the eucharist at Avila, she was raised in a rapture higher than the grate, through which, as is usual in nunneries, it was presented to her. She often heard the voice of God when she was recovered from a trance, but sometimes the devil, by imitation, endeavoured to deceive her; yet she was always able to detect the fraud. She frequently saw St. PETER and St. PAUL standing on her left hand, whilst our Lord presented himself before her eyes in such a manner, that it was impossible for her to think it was the devil; yet, in obedience to the church, and by the advice of her confessor, she insulted the vision, as she had been used to do the evil spirits, by crossing herself, and making signs of scorn. Once, when she held in her hand the cross which was at the end of her beads, our Lord took it from her, and when he restored it, she saw it composed of four large gems incomparably more precious than diamonds.

monds. These had his five wounds engraved upon them after a most curious manner; and he told her that she should always see that same appearance: and so she did; for from that time she no longer saw the matter of which the cross was made, but only these precious stones, although no one saw them but herself. Whenever devils appeared to her in hideous forms, she soon made them keep their distance by sprinkling the ground with holy water. She had often the happiness of seeing souls freed from purgatory, and carried up to heaven; but she never saw more than three which escaped the purifying flame, and these were F. PETER of ALCANTARA, F. IVAGNEZ, and a Carmelite friar.

“ It is acknowledged, that many of her friends, distinguished for their good sense and piety, after examination, were of opinion, that she was deluded by the devil; yet such was the complexion of the times, that she was at last universally regarded as a saint. She had indeed every thing needful to conciliate

the good opinion of her friends, and the admiration of the multitude. The gracefulness and dignity of her appearance, the softness of her manners, and the loveliness of her disposition, the quickness of her wit, the strength of her understanding, and the fire of her imagination, all her natural accomplishments receiving lustre from her exalted piety and zeal, from the sanctity of her life, and the severity of her discipline, all conspired to establish her reputation, as one that had immediate intercourse with heaven.

“ It is curious, yet most humiliating, to see a person of this description, amiable and respectable as St. TERESA, deceived, and, with the best intentions, deceiving others. In this instance, we can readily account for the delusion from the delicacy and weakness of her frame, the strength of a disturbed imagination, and the prevalence of superstition. But when we see men of the finest understandings, in perfect health, of different and distant nations,

tions, in all ages, treading upon the same enchanted ground, we can only wonder; for who can give any rational account of the aberrations of our reason?"



F I N I S.

# I N D E X.

## A

- ABSENCE of Mind* described, Vol. II. p. 3.  
*Abstraction*; what is meant by it, Vol. I. p. 350.  
—; its use in composition, Vol. I. p. 350.  
*Actions of animals in general*; their objects, Vol. II. p. 100.  
*Anger*; its phenomena, Vol. II. p. 280.  
—; its exciting causes, Vol. II. p. 283. 286.  
—; its corporeal effects, Vol. II. p. 288. 292.  
—; when it may be considered as a species of delirium, Vol. II. p. 290.  
—; how it may sometimes produce surprising cures, Vol. II. p. 294.  
*Anaphrodisia*; what, Vol. II. p. 303.  
*Apoplexy*; how it may be produced by anger, Vol. II. p. 291.  
*Association of Ideas*, Vol. I. p. 341.  
—; the principles of, as established by Mr. Hume, Vol. I. p. 342.  
—; objections to his doctrine answered, Vol. I. p. 342, et seq.  
*Attention* defined; Vol. I. p. 252.  
—; distinction between the faculty and the power of, Vol. I. p. 253.  
—; what stimuli excite it into action, Vol. I. p. 253, et seq.  
—; question, whether volition excites it, Vol. I. p. 256, et seq.  
—; in what respect it may be said to be under the influence of our will, Vol. I. p. 258, et seq.  
—; the effects which it has on the mind at large, Vol. I. p. 259.  
Vol. II.

# I N D E X.

- Attention*; the readiness with which we attend to some objects, rather than to others, accounted for, Vol. I. p. 260, et seq.
- ; by what causes it is morbidly altered, Vol. I. p. 269.
- ; its morbid alterations are of two kinds, Vol. I. p. 270, et seq.
- Aversion*; explanation of the term, Vol. II. p. 110.

## B

- Bile*; how it may be changed in quality by melancholy, Vol. II. p. 190.
- Bodies*; their form differ according to the number, nature, and proportion of their elements, Vol. I. p. 223, et seq.

## C

- Cænesthesis*; the sense so called, described, Vol. I. p. 111.
- Catalepsy*; what, Vol. II. p. 87.
- ; case of, Vol. II. p. 87.
- ; case in which it was produced by terror, Vol. II. p. 264.
- Chilblains*; the doctrine of, Vol. I. p. 28.
- Compassion*; definition of, Vol. II. p. 143.
- Content*; definition of, Vol. II. p. 143.
- Convulsions*; cases in which they have been produced by terror, Vol. II. p. 262.
- Consciousness*; what it is, and what it does. Vol. I. p. 233.
- Cilini Benvenuto*; his case, Vol. II. p. 56.
- Corporeal Pleasure and Pain*; how they produce a reflex action on the mind, Vol. II. p. 138.
- ; how they may produce insanity, Vol. II. p. 139.

## D

- Dead-drunk*; the nature of that state described; Vol. I. p. 151.
- Debility indirect*; what is meant by it, and how produced, Vol. I. p. 33.
- Deliria*; their exciting causes enumerated, Vol. I. p. 189.
- Delirious people*; in what respects they differ from those who are sane, Vol. I. p. 137.

*Delirium*



# I N D E X.

- Delirium* of certain fevers; its analogy with that of intoxication, Vol. I. p. 153.  
 — of insane people; its analogy with others, Vol. I. p. 154.  
 — ; its exciting causes classed, Vol. I. p. 141. et seq.  
 — ; inquiry into the nature of its proximate cause, Vol. I. p. 165, et seq.  
*Desire*; explanation of the term, Vol. II. p. 110.  
*Desires and Aversions*; how distinguished from passions, Vol. II. p. 113.  
 — ; their bodily effects, Vol. II. p. 112.  
*Despair*; how it may produce suicide, Vol. II. p. 194.  
 — ; its sources, Vol. II. p. 196.  
 — ; how it may occasion the crime of murder, Vol. II. p. 202.  
*Dizziness*; a description of, Vol. I. p. 324, et seq.

## E

- Ecstasy* defined, Vol. II. p. 142.  
*Education*; its objects, Vol. I. p. 264.  
 — ; its effects in creating artificial desires, Vol. I. p. 268.  
*Emotion*; general signification of the term, Vol. II. p. 114.  
*Ennui*; what it is, Vol. I. p. 321.  
*Epilepsy*; cases in which it has been produced by fear and by terror, Vol. II. p. 263, 272.  
*Esteem* defined, Vol. II. p. 144.

## F

- Faculty*; the difference between it and power, Vol. I. p. 231.  
*Faculties of the Mind*; how they may become sources of pleasure, Vol. II. p. 148.  
*Fanatical Lady*; case of, Vol. II. p. 46.  
*Fear*; definition of, Vol. 2. p. 176.  
 — ; how excited, Vol. II. p. 251.  
 — ; how distinguished from terror, Vol. II. p. 267.  
 — ; its corporeal effects, Vol. II. p. 255, 265.  
 — ; how it may produce many serious diseases, Vol. II. p. 261.  
 — ; its mental effects, Vol. II. p. 274.  
*Feelings*; enumeration of them, Vol. II. p. 101.  
*Figure of impresson*; what is meant by the term, Vol. I. p. 65.  
*Food*; the effects of, Vol. I. p. 25, et seq.

*Forgetful-*

# I N D E X.

*Forgetfulness*; singular instance of it, Vol. I. p. 369.  
*Fidgets*; what they are, Vol. i. p. 272.

## G

*Genius* analized, Vol. II. p. 20.  
*Girtanner*, Dr. his hypothesis concerning irritability, Vol. I.  
 p. 33, et seq.  
 —; his account of scurvy, Vol. I. p. 43.  
*Glysson*, the true parent of the doctrine of irritability,  
 Vol. I. p. 1.  
*Gragert* Christian; his case, Vol. II. p. 224.  
*Gratitude*; definition of, Vol. II. p. 143.  
 —; why it does not arise from selfishness, Vol. II,  
 p. 246.  
*Grief*; its debilitating effects how produced, Vol. II,  
 p. 182.  
 —; its general corporeal effects, Vol. II. p. 178. 188.  
 —; its various modifications, Vol. II. p. 174.  
*Grokatski* George; his case, Vol. II. p. 264.

## H

*H. Mr.* his case, Vol. II. p. 321.  
*Haller's* opinion concerning memory, Vol. I. p. 352.  
 —; not the discoverer of irritability, Vol. I. p. 1.  
 —; his merits in regard to this subject, Vol. I. p. 3.  
*Hauslerin* Catherine; her case, Vol. II. p. 215.  
*Heat*; the danger of sudden exposure to it after the body  
 has been chilled with cold, Vol. I. p. 28, et seq.  
*Hearing*; explanation of several of its phenomena, Vol. i.  
 p. 87.  
*Heart* of certain cold-blooded animals does not immediately  
 contract when distended with blood, Vol. I. p. 17.  
*Hesitation* in speech; cause of it, Vol. II. p. 79.  
*Hope*; definition of, Vol. II. p. 143.  
 —; how it may become a source of great mental injury,  
 Vol. II. p. 165.  
*Hypochondriasis*; its progress described, Vol. I. p. 192.  
 —; its connection with diseased abdominal  
 viscera, Vol. I. p. 189, et seq.  
 —; how diseased viscera produce hypochon-  
 driacal illusions, Vol. I. p. 208.  
 — is now and then caused by affections of the  
 mind; how this happens, Vol. I. p. 200.

*Hypo-*

# I N D E X.

*Hypochondriacs* struggle for a time with their strange thoughts, Vol. I. p. 202.

*Hypochondriac*; the diary of one, Vol. I. p. 203.

*Hypochondriacal* painter; anecdote of one, Vol. I. p. 209.

## I

I. H. G. a maniac; his case, Vol. I. p. 155.

*Idea*; what it means, Vol. I. p. 307, et seq.

*Idiotism*; its nature and history, Vol. I. p. 314.

*Illusions*; Vol. II. p. 337.

*Imagination*; the expression how misapplied, Vol. II. p. 1.

———— acts of, distinguished, Vol. II. p. 6.

———— creations of; how they become considered as real, Vol. II. p. 37.

————; cases of persons believing them real; Vol. II. p. 44.

————; dangerous effects following the above circumstance, Vol. II. p. 57.

*Intoxication*; its various effects on the mind described, Vol. I. p. 150.

*Involuntary actions*; enumerations of them, Vol. II. p. 100.

*Irritability*; how it is proved to be a distinct principle from nervous energy, Vol. I. p. 5, et seq.

———— of various vegetables, Vol. I. p. 6, 7.

———— not proportionate to sensibility, Vol. I. p. 3.

———— fresh water polyps irritable, but not sensible, Vol. I. p. 9.

———— the principle of, secreted.

*Irritable parts*; how the various ones of a complex animal are united, so as to receive the influence of general stimuli applied to one organ only, Vol. I. p. 20.

*Joy*; its modifications, Vol. II. p. 141.

————; its corporeal effects, Vol. II. p. 157.

————; why some persons are more disposed to be affected by it than others, Vol. II. p. 162.

————; its mental effects, Vol. II. p. 163.

————; its bad effects when extreme, Vol. II. p. 169.

*Judgment*; what is meant by the word, Vol. I. p. 386.

————; under what classes its various objects may be arranged, p. 387, et seq.

————; deviation from it of two kinds, Vol. I. p. 403.

———— incorrect; how produced, Vol. I. p. 403.

———— erroneous; how produced, Vol. I. p. 407.

K. Mar-

# I N D E X.

## K

K. Margaret ; her case, Vol. II. p. 205.

## L

*Laughter* ; whence it arises, and how excited, Vol. II.  
p. 152.

Le Compte ; his case, Vol. II. p. 246.

Lenz Mr. Charles ; his friend's case, Vol. II. p. 15.

*Liberty of Action* analyzed, Vol. II. p. 72.

*Love* ; definition of, Vol. II. p. 298.

—— ; its effects, Vol. II. p. 301. 316.

—— ; how considered by various philosophers, Vol. II.  
p. 307.

—— ; by what qualities it is excited, Vol. II. p. 308.

—— ; how it may sometimes be excited at first sight,  
Vol. II. p. 312.

—— ; why it has often been supposed to give birth to  
madness, Vol. II. p. 320.

—— ; in what manner it may produce a paroxysm of ma-  
nia, Vol. II. p. 320.

—— ; how it may occasion murder, Vol. II. p. 323.

*Love-matches* ; why so much diversity of taste is seen in  
forming them, Vol. II. p. 314.

Louisa ——— ; her Case, Vol. II. p. 324.

*Luft* defined, Vol. II. p. 303.

## M

*Mania* ; Dr. Monro's account of its gradual approach,  
Vol. I. p. 158.

—— ; its general character, Vol. I. p. 159.

*Maniacs* ; the morbid appearances of their brain enumerated,  
Vol. I. p. 163, et seq.

—— ; several of their actions accounted for, Vol. I.  
p. 178, et seq.

Mason the Rev. John ; his case, Vol. II. p. 55.

*Matter* ; an unintelligible term, Vol. I. p. 235.

*Melancholy* ; its origin, Vol. II. p. 184.

—— ; its phenomena, Vol. II. p. 187, 228.

—— ; why it may terminate either in mild delirium,  
or in mania, Vol. II. p. 220.

—— ; how certain professions dispose to it, Vol. II.  
p. 235.

*Melan-*

# I N D E X.

- Melancholy*; how to be distinguished from hypochondriasis, Vol. II. p. 235.
- ; its various species, as described by Sauvages, Vol. II. p. 237.
- Melancholia attonita*; case of, Vol. II. p. 242.
- *errabunda*; its character, Vol. II. p. 242.
- *fatens* described, Vol. II. p. 244.
- *phrontis* described, Vol. II. p. 249.
- Melancholic temperament*; its character, Vol. II. p. 227.
- Mental pleasure and pain*; how distinguished from corporeal, Vol. II. p. 117.
- ; definition of, Vol. II. p. 117.
- ; their effects on the body, Vol. II. p. 119.
- ; their causes why so difficult to enumerate, Vol. II. p. 122.
- ; general classification of their causes, Vol. II. p. 124.
- Memory*; definition of, Vol. I. p. 338.
- ; its uses, Vol. I. p. 359.
- ; instance of very quick and retentive, Vol. I. p. 361.
- ; how it is to be strengthened, Vol. I. p. 364.
- ; causes which weaken it, Vol. I. p. 365, et seq.
- ; impaired cases of, Vol. I. p. 375, et seq.
- ; mechanical account of it, Vol. I. p. 352.
- is diminished by many causes, Vol. I. p. 357, et seq.
- Mental faculties*; their number, Vol. I. p. 232.
- perception; what is meant by it, Vol. I. p. 56.
- Mind*; investigation of its phenomena, Vol. I. p. 229.
- universal; account of it, Vol. I. p. 220.
- not brain, as Dr. Priestley imagines, Vol. I. p. 238.
- does not decay in proportion with the body, Vol. I. p. 243, et seq.
- Motives of Action* defined, Vol. II. p. 66.
- ; in what respect they differ from those thoughts which only give exercise to the faculties of the mind, Vol. II. p. 67.
- Moravian sectary*; a case of one, Vol. II. p. 63.
- Morbid action*; what is meant by it, Vol. I. p. 169.
- Murder*; from what causes it may proceed in melancholic people, Vol. II. p. 215.

# I N D E X:

## N

- Nervous impresson* ; what is meant by the term, Vol. I.  
 P. 55. .  
 ————— ; external ones; what they are, Vol. I.  
 P. 57.  
 ————— ; internal ones; what they are, Vol. I.  
 P. 57.

## O

- Observation* ; in what it consists, Vol. I. p. 310.  
*Officer of Artillery* ; case of one, Vol. I. p. 84.

## P

- Pain corporeal* ; causes of investigated, Vol. I. p. 120.  
 ————— ; Dr. Darwin's opinion concerning certain  
 causes of bodily pain criticised, Vol. I. p. 122.  
 ——— *mental* ; in what it consists, Vol. II. p. 117.  
*Pleasure corporeal* ; why in some habits the immediate off-  
 spring of pain, Vol. I. p. 134.  
*Painful feelings* of hypochondriacs accounted for, Vol. I.  
 p. 197, et seq.  
 ————— ; how they destroy the operations of reason,  
 Vol. II. p. 128.  
*Passions* ; how they ought to be considered in a medical  
 point of view, Vol. II. p. 98.  
 ————— ; how produced by ideas, Vol. II. p. 115.  
 ————— ; how they alter the state of circulation, Vol. II.  
 p. 134.  
 ————— ; their animal effects, Vol. II. p. 126.  
 ————— ; pleasurable ones, how they ought to be classed,  
 Vol. II. p. 153.  
*Perception mental* defined ; Vol. I. p. 291.  
 ————— ; Dr. Reid's account of it, Vol. I. p. 293.  
 et seq.  
 ————— ; Aristotle's opinion of it justified, Vol. I.  
 p. 294.  
 ——— *single* ; how complicated actions arise from it,  
 Vol. II. p. 73.  
*Polyps* ; their structure exhibit nothing like brain or nerves,  
 Vol. I. p. 10.  
*Power* ; the difference between it and faculty, Vol. I. p. 231.  
 Priestley, Dr. his hypothesis concerning mind criticised,  
 Vol. I. p. 231.

*Pride* ;

# I N D E X:

*Pride*; how it gives birth to insanity, Vol. II. p. 168.  
*Principles of the mind*; what they are, Vol. I. p. 232,  
 et seq.

## R

Rau; his case, Vol. II. p. 58, et seq.  
*Reason*; what it is, Vol. I. p. 391.  
*Recognition*; what is meant by the term, Vol. I. p. 338.  
*Recollection*; what it is, Vol. I. p. 339.  
*Reflection*; what it is, Vol. I. p. 310.  
*Regard*; definition of, Vol. II. p. 144.  
*Religious enthusiasm*; its dangerous effects and modes of termination, Vol. II. p. 57.  
*Representative faculty of the mind*; when disproportionate to the other faculties extremely dangerous, Vol. II. p. 8.  
 —————; the causes of its disproportion, Vol. II. p. 10.  
 —————; the marks by which the disproportion is discovered, Vol. II. p. 11.  
 —————; the derangement which arises from such disproportionate activity, Vol. II. p. 14.  
*Remorse*; definition of, Vol. II. p. 127.  
*Reverie*; what is meant by it, Vol. II. p. 3.  
 —————; cause of it explained, Vol. II. p. 4.  
 Rust; his case, Vol. II. p. 290.

## S

S. M. V. his servant-maid's case, Vol. II. p. 15.  
 Salomon Galmus; his wife's case, Vol. I. p. 211.  
*Self-murderer*; Journal of one, Vol. II. p. 198.  
 Senac; his objection to Haller's doctrine of the motion of the heart, Vol. I. p. 16.  
 —————; his objection answered by Whytt, Vol. I. p. 17.  
 —————; his objection answered by the doctrines of irritability, Vol. I. p. 18.  
*Sensation*; definition of it, Vol. I. p. 53.  
 —————; a complex affection, Vol. I. p. 54.  
 —————; new hypothesis concerning it, Vol. I. p. 62.  
 —————; Dr. Darwin's hypothesis examined, Vol. I. p. 75, et seq.  
*Sensibility*; what is meant by it, Vol. I. p. 54.  
*Sentient principle*; what is meant by it, Vol. I. p. 54.  
 VOL. II. I i *Sensorial*

# I N D E X.

*Sensorial impression*; what is meant by the term, Vol. I. p. 56.

————; why they act on one class of nerves rather than on another, Vol. II. p. 137.

Seybell; his case, Vol. II. p. 232.

*Sighing*; how caused, Vol. II. p. 179.

*Sight*; several of its phenomena explained, Vol. I. p. 95.

*Spirit*; an unintelligible term, Vol. I. p. 235.

*Sobbing*; its causes, Vol. II. p. 179.

*Solidity*; how we acquire a notion of it, Vol. I. p. 236.

Spalding, Mr. his case, Vol. I. p. 287.

*Sound* is a compound effect, Vol. I. p. 83.

————; how the sound of one instrument is distinguished from that of another, Vol. I. p. 94.

*Study*; the dangers arising from its being too long protracted, Vol. II. p. 27.

————: how it may produce delirium, Vol. II. p. 24.

St. Teresa; her case, Vol. II. p. 45. et appendix.

Swiss Gentleman; his case, Vol. II. p. 33.

## T

Taffo; account of his illusion, Vol. II. p. 41.

Taffurus Sinamus; his case, Vol. II. p. 171.

*Terror*; definition of, Vol. II. p. 176.

————; its origin, Vol. II. p. 253.

————; its effects, Vol. II. p. 259.

*Timorous disposition*; its character, Vol. II. p. 269.

Titius, Professor; his case, Vol. II. p. 257.

*Touch*; the sense of, described, Vol. I. p. 84.

## V

*Vengeance* defined, Vol. II. p. 285.

*Vertigo*; nature of explained, Vol. I. p. 324, et seq.

*Vesania*; how arranged, Vol. II. p. 336, et seq.

Vicentinus; his illusion, Vol. I. p. 218.

*Vision*; single with two eyes, not to be explained on mathematical principles, Vol. I. p. 98.

Voelkenor Daniel; his case, Vol. II. p. 209.

*Volition*; how excited, Vol. II. p. 68.

————; how it fails to produce the intended effects, Vol. II. p. 82.



# E R R A T A.

---

*The Author requests the following errors to be corrected:*

Vol. I.	p. 16.	l. 16.	for these parts	read	muscular parts.
	p. 142.	l. 3.	— succeed	—	fucceeds.
	p. 152.	l. 20.	— phrenetis	—	phrenitis.
	p. 172.	l. 18.	— operationes	—	operations.
	p. 174.	l. 9.	— independent	—	independently.
	p. 175.	l. 3.	— according	—	accordingly.
	p. 200.	l. 12.	— intelligable	—	intelligible.
	p. 210.	l. 19.	— he	—	which an hypochondriac.
	p. 224.	l. 8.	— produce	—	produces.
	p. 229.	l. 2.	— cease	—	ceases.
	p. 270.	l. 21.	— three	—	two.
	p. 353.	l. 21.	— they	—	the ideas.
Vol. II.	p. 25.	l. 19.	— ensues	—	ensue.
	p. 33.	l. 18.	— remarkakle	—	remarkable.
	p. 107.	l. 16.	— epididemis	—	epididymis.
	p. 294.	l. 5.	— cholidicus	—	choledochus.
	p. 443.	l. 11.	— hyofcyanus	—	hyofcyamus.
		l. 12.	— maculatum	—	maculatum.
		l. 17.	— Fritish	—	Fritsch.
		l. 19.	— datum	—	datura.